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SOCIETY OF ANTIQUARIES
OF LONDON

25TH NOVEMBER 1909 TO 29TH JUNE 1911

SECOND SERIES, VOL. XXIII

32326



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PRINTED AT OXFORD BY HORACE HART FOR
THE SOCIETY OF ANTIQUARIES
BURLINGTON HOUSE, LONDON

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PROCEEDINGS
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SOCIETY OF ANTIQUARIES
OF LONDON

SESSION 1909—1910.

THURSDAY, 25th NOVEMBER, 1909.

CHARLES HERCULES READ, Esq., LL.D., President,
in the Chair.

The following gifts were announced, and thanks for the same ordered to be returned to the donors :

From Mrs. J. J. Stevenson :—A restoration of the Mausoleum at Halicarnassus. By J. J. Stevenson, F.S.A. 8vo. London, 1909.

From Harold Sands, Esq., F.S.A. :

1. The history of Nottingham Castle from the Danish invasion to the destruction by rioters in 1831. By John Hicklin. 8vo. London, 1836.

2. The castle of Kenilworth, a handbook for visitors. By Rev. E. H. Knowles. 4to. Warwick, 1872.

3. Le château de Coucy. Par E. Lefèvre-Pontalis. 8vo. Paris. n.d.

From the Publisher, Mr. E. Stanford :—A guide to Avebury and neighbourhood. By R. Hipsley Cox. 8vo. London, 1909.

From T. S. Bush, Esq. :—Old Bath Preservation Society's pamphlets, Nos. 1 and 2. 4to. Bath, 1909.

From the Author :—The plague-stricken Derbyshire village, or what to see in and around Eyam. By Rev. J. M. J. Fletcher. 8vo. Tideswell, 1909.

From Earl Brownlow :—Records of the Cust family, Series II. The Brownlows of Belton, 1550–1779. Compiled by Lady Elizabeth Cust. 4to. London, 1909.

From the Author :—Notes on the ninth iter of Antoninus with special reference to the sites of Sitomagus and Venta Icenorum, reconsidered in the light of the Tabula Peutingeriana. By Rev. H. J. D. Astley. 8vo. n.p., n.d.

- From the Author :—The last days of Charles II. By Raymond Crawford, M.D. 8vo. Oxford, 1909.
- From Edward Hudson, Esq., F.S.A. :—The architectural history and legends of the manor house or castle of Hilton. By W. H. Dyer. 8vo. Newcastle-upon-Tyne, 1871.
- From the Publisher, Mr. T. Fisher Unwin :—Chats on old silver. By E. L. Lowes. 8vo. London, 1909.
- From the Author :—Some observations on dew ponds. By E. A. Martin, F.G.S. 8vo. London, 1909.
- From the Author :—Jamaica place-names. By Frank Cundall. 8vo. Kingston, Jamaica, 1909.
- From the Author :—Catalogue of printed music in the Library of the Royal College of Music, London. By W. Barclay Squire, F.S.A. 4to. London, 1909.
- From the Compiler :—Catalogue of the Bowles Collection of token coins, medals, etc. in the Bristol Museum of Antiquities. Compiled by Richard Quick. 12mo. Bristol, 1909.
- From the Compiler :—Genealogy of the Pilkingtons of Lancashire and their chief branches, from 1066 to 1600. Compiled by Lieut.-Colonel John Pilkington, F.S.A. Single sheet folio. Liverpool, n.d.
- From the Authors :—Some interesting Essex brasses. By Miller Christy, W. W. Porteous, and E. Bertram Smith. (Reprinted from the *Transactions of the Essex Archaeological Society*, xi. 2.) 8vo. n.p. 1909.
- From the Author :—History of the manor of Westhope, co. Salop. By Evelyn H. Martin. 4to. Oswestry, 1909.
- From the Authors :—The Roman city of Venta Silurum, Caerwent, Monmouthshire. By F. King and J. Cropper. 8vo. Bristol, 1909.
- From the Author (Rev. Dom L. Guilloreau) :
1. Prieurés anglais de la dépendance de Saint-Serge d'Angers, Totnes, Tywardreth, Minster (xi^e-xvi^e siècles). 8vo. Ligugé (Vienne), 1909.
 2. Chartes d'Ottertun, prieuré dépendant de l'abbaye du Mont-Saint-Michel (Devon). 8vo. Ligugé (Vienne), 1909.
- From the Author :—Eight episodes in the history of Bath. By J. F. Meehan. 8vo. Bath, 1909.
- From Sir Edward W. Brabrook, C.B., V.P., and Director :—Bushman paintings, copied by M. Helen Tongue. With a preface by Henry Balfour. Fol. Oxford, 1909.
- From Harold Sands, Esq., F.S.A. :—Histoire de la conquête de l'Angleterre par les Normands. Par Augustin Thierry. Atlas. Obl. fol. Paris, 1843.
- From the Institut d'Estudis Catalans, Barcelona :
1. L'arquitectura Romànica a Catalunya. Vol. I. Precedents. 4to. Barcelona, 1909.
 2. Les pintures murals Catalanes. Fascicle I. Pedret. Fol. Barcelona, n.d.

The Rev. J. T. FOWLER, D.C.L., F.S.A., presented a six-

teenth-century tile from Keymer Church, Sussex, upon which he communicated the following note :

"I am sending as a present to the Society an almost perfect example of a flooring tile of a rare type, which I picked up at Keymer church, in Sussex, while 'restoration' was going on, some time in the sixties. I think there were others of the same kind lying about. In vol. xvi. of the *Sussex Archaeological Collections*, p. 128, is a woodcut of an imperfect example of one like this which I am sending, together with another of the same type but different in detail. These tiles were said by Mr. Albert Way to have been made in Normandy, especially at Neufchâtel, about the time of Francis the First, and it appears that there were several of them in a private collection in Rouen. Others have been found in the ruins of another building at Keymer at some little distance from the church, also at the neighbouring church of Hurstpierpoint. These particulars are from an article by the Rev. Edward Turner in the volume above cited, pp. 126-137."

Thanks were ordered to be returned to Dr. Fowler for his gift.

In pursuance of the Statutes, Chapter I, Section 5, the Hon. Sir Matthew Ingle Joyce, Knt., a judge of the Chancery Division of His Majesty's High Court of Justice, was elected Fellow.

John Humphreys, Esq., M.D.S., was admitted Fellow.

The PRESIDENT announced that he had received a communication from Mr. W. Bruce Bannerman, F.S.A., reporting that at the council meeting of the borough of Croydon on 22nd November, a resolution against a proposed Improvements Bill which would probably have involved the destruction of the Whitgift Hospital buildings had been carried by 29 votes to 25. The hospital may therefore be considered safe for the present.

The Rev. H. G. ROSEDALE, D.D., F.S.A., exhibited a manuscript Book of the Horners' Company of London, upon which he read the following notes :

"In Messrs. Sotheby's Sale Catalogue for March 2nd and 3rd, 1909, p. 68, there appeared the following entry :

'685 LONDON. THE HORNERS COMPANY, DOCUMENTS ON VELLUM CONCERNING THE WORSHIPFUL COMPANY OF HORNERS OF THE CITY OF LONDON, from the Reign of King Richard II (14th year A.D. 1391) to A.D. 1635; with an old English Calendar, 33 leaves, written in various hands, original calf, with metal bosses and centre ornaments, clasp catches, and link for chaining
sm. 4to. CENTS. XVI-XVII

*** Very interesting volume on a now extinct City Company, written in several hands in the 16th and 17th centuries,

they being copies of older documents. The Calendar at the beginning occupying 6 ll. is written in a rude **gothic letter** in red and black and commemorates several London Saints. Then comes (I) Copy of a Petition to Stephen Forster Mayor, and the Aldermen of the City (temp. Henry VI) from the "*Goode folkes of the mystier of Horners enfranchised of this City*" (2 ll.). (II) "*The VIII day of Aprill in the year of the regne of Kyng Richard the Second the XIII yeer come the worthi men of the Crafte of Horners of the Cite of London and deliverede to the maire and haldermen a bill,*" etc. (2 ll.). (III) "*Memorandum die quinto Martii Anno Regni Regis Edwardi quarti, post conquestum sexto decimo probi homines tam mistere de Horners quam mystere de Bottell Makers,*" etc. (IV) Memorandum on the Petition of the Horners' Company to Sir Nicholas Mosley, Lord Mayor Anno Q. Eliz. XLII (5 ll.). (V) "*Heere beginnes ye old Orders of this booke, written out in Englishe the XXIII. daie of September anno dni 1600*" (9 ll.). (VI) Petitions, etc. of the Horners' Company to the Lord Mayor, 1635, etc. (6 ll.).

This manuscript was purchased by the Horners' Company, and is now lent for exhibition by the Master, wardens, and assistants of the Company.

The 'Mystery of Horners' is still a flourishing City Company, and has twice during the last three years taken part in the Lord Mayor's Pageant. In 1882 it organized an exhibition of horns and horn-work at the Mansion House, which was very popular, and in 1900 presented to King Edward a magnificent horn casket mounted in silver, which is preserved in the King's Horn Room.

It is not my intention to give a history of the Worshipful Company of Horners, which, in anything like a complete form, has yet to be written. An interesting article, however, on the Company by Mr. C. H. Compton in the *Journal of the British Archaeological Association*¹ gives much information as to its antiquity. The object of my paper to-night is to call attention to the volume already referred to.

I would suggest that this little volume is of considerable interest, for, so far as I have been able to ascertain, few if any Companies have anything of the sort. Whilst the 'Orders', as they are called, exist in many cases, they are generally in the form of loose sheets, whereas from internal evidence it seems likely that the volume before you was in book form probably even before it had its present Elizabethan binding. It will be observed that the binding is excellent, and according to experts

¹ Vol. xxxv. 372-9.

is of about the end of the 16th century. The Tudor Rose is stamped or worked on all the metal corners and bosses, and although the clasps have disappeared in the lapse of time, there is a large ring attached to the cover to which doubtless a chain was fastened in order to secure it to the desk of the chief official of the Company, then probably one of the Wardens.

It possesses thirty-three leaves of quarto parchment, measuring in its present cut-down form about $8\frac{1}{2}$ by 6 inches, and is written in various hands from 1455 to 1635. The entries on the first two sheets are copies of documents of an earlier date than 1455, the originals of which it would be very interesting to discover.

Like many other books of the Reformation or pre-Reformation period, this volume has prefixed to it a Calendar, necessary as a guide to dates, which were generally expressed at that time by reference to the nearest Saints' Days, as for instance 'Holden the Mundaie next before the feast of St. Clement in the Yeaere, &c.' This Calendar is copied from a much earlier one, which we may presume had been used so long by the Company that it had fallen into decay.

Immediately following the Calendar are two leaves upon which is a contemporary copy of an entry in Letter Book K of the City of London, folio cclxxi. This is a petition of the Company to Stephen Forster, Mayor, and the aldermen of the City, dated 33 Henry VI. (1455), in which the 'goode folkes of the Mystier of Horners' (who it should be noted were already enfranchised of the City) 'beseechen in right humble wyse, &c.' that the secret of the Craft may be preserved, that no 'grene hornes' might be cut, that none of the Craft be permitted to revile any other. This petition was duly granted.

The next entry is in a little later hand, and may be placed either at the end of the reign of Henry VI. or early in that of Henry VII. Though the copy is later, yet it records a much earlier petition, viz. in 14 Richard II. (1391). The company ask that they may appoint two wardens on the Feast of St. Michael each year, who shall have power to search for all bad work and to present the culprits to the chamberlain at the Guildhall. That no work may be done at night, on Saturday afternoons, or on the evenings of vigils under a penalty of 3s. 4d. to the Guildhall, and 1s. 8d. to the Company. Also that no foreigner be allowed to keep a shop within the City, and that no member of the Craft be enfranchised before he be 'proved & witnessed for good Able by the Wardeyns & iiii other goode men of the same Crafte'. This petition was granted by Adam Bame, Mayor, and ordered to be entered, and will be found in Letter Book H, folio cclix; whilst Robert Baron and Henry Payne were elected and sworn to rule the Craft. A rider was attached to this grant, viz. that no

apprentice or freeman was to divulge any secret of the Craft to any one else on pain of a fine.

An interesting point arises in consequence of this document. In the Year Books of the City, the two men above-named are described as masters, whilst in this MS. they appear as wardens, thus showing that the two terms are synonymous, and it may go far to explain why in some companies two masters are elected annually. In this connexion, too, it may be worth noting that the names of those who represent the *Cornuarii* at the Guildhall change from year to year, and that as early as 1376 we have a record of the Horners' Company sending two representatives to the Common Council, who in that year were Walter Gerard and William Milward. It is important to bear in mind that the term 'master' is rarely applied to the chief official of any of the Companies in 'orders' issued during the 13th, 14th, or 15th centuries, because that term was then used to express one who had passed through an apprenticeship and journeyman's probation and had finally been adjudged a 'master of his craft'.

The next document, which is certainly not later than the reign of Henry VIII., is partly in Latin and partly in English. In this petition it is prayed that the Company of 'Bottell Makers', which had already been for some time intimately associated with the Horners, might henceforth be ruled by the same wardens, and they together might be one and the same Company, 'that from henceforth the saide persones of both the saide Crafts may be as brethren & occupie & Joyne together as well as in all things to be borne & doone within the said Cettie, As in observing, &c.' This was duly granted by the mayor and aldermen, and entered in Letter Book L, folio cxvi.

We now come to a late Elizabethan entry. It is a copy of the petition sent to Sir Nicholas Mosely, lord mayor in 47 Elizabeth, and as these are probably the most interesting portions of the book and seem to be the best form of what are generally known as 'orders', it may be worth while to quote some portion of them for their completeness, though the 'Orders' made in 33 Henry VI. (the first MS. to which I drew attention) were always known as the 'Old Orders'.

'Imprimis that the wardens & assistants of the Companye of Horners of this Cittie of London that nowe are, or hereafter shalbe, or the more part of the said Assistants & the said wardens for the tyme being, shall from henceforth from tyme to tyme hereafter for ever appoynte two or more honest fitt meet & sufficyent persons to buy & provyde for the forsayde whole Company of Horners, such quantity & quantities of all sortes & kindes of rough hornes whatsoever, gathered or growing, or hereafter to be gathered & growing, within this Realm of England to & for the generall

& common use of the said whole Company, as to the said wardens & assistants for the tyme being, or to the more part of the said Assistants & the said wardens for the tyme being, shalbe thought meet & convenyent; which said persons so appointed & every of them shall, from tyme to tyme for ever hereafter, bring or cause to be brought all the same hornes by them or any of them bought & provyed, to such place & places in or neare unto the forsayd Cittye As they and every or any of them shalbe appointed by the said wardens & assistants or the more part of them for the tyme being & that the same hornes shall afterwards by the wardens & more part of the Assistants of the same Company for the tyme being, from & after the Feast of Saint Michael the Archangell nowe next commyng, for ever be monthlie shared distributed allotted and devyded amongst the severall freemen of the said Company, being workemen traders & shopp keepers for themselves, in such manner & forme as hereafter is mencyoned & expressed & not otherwise nor in any other sort, That is to saye, into as many equall shares or parts as at every such monthlie devision there shalbe freemen of the said Company that be workemen traders & shoppkeepers for themselves And every freman of that Company that then is & hath been a Workeman trader & shoppe keeper for himself under the full tyme & space of three yeres, shall then wholly have one of the said shares or partes & not above, paying for the same as aforesayd & provyded allwayes that at every fowerth division & allottement of the foresayd Hornes to be monethlie made as aforesayd seaven of the Ancientest men of the said Company, that oftenest have borne office of warden in the same, shall then have one halfe hundreth hornes apiece out of the whole complement then to be divided more than any of the rest of the said Company, paying for the same as aforesayd &c.

Item, that noe Freeman of the same Company do from henceforth take and keepe at one tyme above one Apprentyce unlesse such freeman be or have bene one of the Wardens of the said Company, or have been free of the said Company by the space of seaven Yeares at the least. And if such freeman be or have bene free of ye same Company by the space of seaven yeres as aforesayd, then yt shalbe lawful for him to take and keepe two apprentices at one tyme and not above.

Item, that every person and persons that hereafter shalbe made free of the said Company shall serve as a Jorney man in the same occupacon by the space of two whole yeres next after he or they shalbe made free of the said Company and of this City before he or they, so being made free, shall or may sett upp or keepe shoppe for him or themselves within this City or the libertyes thereof,

unlesse such person and persons be worth tenne poundes at the least of his and their owne proper goodes at the tyme of such setting upp or shoppkeeping.

Item, that if any brother or brethren of the sayd Company shall hereafter breake any of the said Ordinances, or any other ordinance of the sayd Company heretofore approved & allowed by her Majesty's courte holden before the Lord Maior & Aldermen of this citty or shall revile or abuse publikely or privatly any of the Wardens or Assistants of the sayd Company, now being or hereafter to be, That then the sayd wardens of the said Company for the tyme now being & hereafter to be, shall & may from henceforth forever uppon every such occasion, by and with the privity and consent of the said Lorde Maior for the tyme being, cause every such offender & offenders to be commytted to warde by someone of his lordeshippes officers into one of the compters of this citty, there to remayne uppon his lordeshippes commandement by & during such tyme as the quality & quantity of his & their offence & offences shall deserve And untill the said Lorde Maior shall thinke good to delyver him & them so offending out of pryson. And that the wardens of the said Company being shall with all convenyent speed after the committing of every such person & persons make known the same & the cause of his and their commitment to the said Lorde Maior of this Citty for the tyme also being. Thomas Smyth. Robert Fletton.

Which report being read in this Courte was liked & allowed of & ordered that the same shalbe entred into the Reportory & observed in all points accordingly. Sebryht.

John Okes &) WARDENS

John Okeley } of the Company of Horners when the
orders next before wrytten were estab-
lished & confirmed.'

After this we have another late Elizabethan copy made in the year 1600 of the Old Orders just alluded to. This may have been rendered necessary from the fact that some part of the document at the beginning of this book is in Latin, and in the practical days of the beginning of the seventeenth century that ancient language was less familiar than in earlier days. The engrossment at the top of the first pages of this entry is as follows:—

'Here beginnes ye old orders of this booke, written out in Englishe the xxiii daie of September Anno Domini 1600.' There is, too, a delightful quaintness in the way these old Orders begin.

'Memorandum. That the foure & Twentithe daie of February in the Three & thirtieth yere of the reigne of King Henry the sist, after ye Conquest, did come heere into the Kings court

of ye Gnylde Hall of the Citie of London before Stephen Foster Maior & Aldermenne of the same Citie ye Gardian & ye rest of ye honest & approved men of the Mistery of Horners of the Citie of London & brought unto the said Maior & Aldermen a certeine supplicacion or Bill conteyning these words videlicet :

To the Right Honorable & good Lord the Maior & worshipful the Aldermen of the Citie of London.

Beseeechen in right humble wise, the good folkes of ye mistry of Horners enfranchised of this Cittie that your good grace will ordeine & graunt that the points & articles hereafter following in everything may be affirmed established & enrolled &c.

First inasmuch as the making of Hornes & other workes pertyning unto their said mistry beth not perfectly had nor knowne in any region or place of the world except in this land only: which causeth the people of other lands & places to resort & repaire unto this Citie for Hornes yeerly, unto the great proflitt & worship of the same Citie whereas if such people of strange lands might cleerly & perfectly understand the cunning & feat of making of such English Hornes, would not heder repaire yeerly to buy such English chaffer, &c.

At the end of this entry is a further recital of the 'Orders of Richard II.', the second document quoted, which concludes with a passage not to be found in the letter books of the City. There is, too, another version of this entry later in the book :—

'The bottellmakers have continued in the company of the Horners a hundred fourscore nine yeares & nine monthes, wrytten the last daie of November Anno Dñi One thousand five hundredth & fiftie & seaven.' Thus proving that at least in 1368 the Horners were of sufficient importance for the bottlemakers, who, it will be remembered, at first made their bottles of horn, as well as leather, to place themselves under their patronage, a fact indicated on the arms of the Company, which consist of three horns and three bottles.

In this relation, we touch upon an interesting question, why was there so much activity shown at the end of the 16th century in the matter of recording the Charters of the Company? The answer to that is only to be found in the fact that in the year 1592 some encroachments were made on the company's rights and privileges by two men, who had obtained from the queen a licence to transport horns abroad. There are in the British Museum two petitions of the Horners' Company, dated 1592[-3] and 1598, both addressed to Sir William Cecil, Lord Burghley, as follows :

'To the Right Honorable the Lord Burghley Lord Highe Treasurer of England. In most humble wise compleyninge doe showe unto your good Lordshipp youre suppliants the whole mis-

terie or companie of Horners of the Cittie of London. That whereas the said Companie of Horners have alwaies heretofore bought all manner of Hornes & wrought the best to shewe in this Realm & had liberties alwaies to sell their refuse & some of their wrought ware as blowing hornes Shoe Hornes & Lanterne Hornes to diverse merchants both English & straungers of which libertie your Lordships supplicants to the utter undoynge of them all their wiefes & children are now Restreyned by Symon Furner merchant & John Crafford Scrivenour who have gotten a Lycence from the Queens Majesty for Transportinge of Hornes & other things Which Lycence they strictlie use that theirby they doo not onlie great damage & hindrance to the Queens Majesty in Her custom but also undoo the said whole Companie of Horners for whereas Her Majesties custom ys xviid for every thousand of Hornes they will lett none passe under xd a thousand to themselves which extreme charge newlie Imposed doth so hinder Traffique that in short tyme Her Majestie shall not onlie lose all or the most parte of Her said custome but also your suppliants trade & dealings utterlie spoiled unlesse some speedye remedie be thereunto had. These premisses considered & for that in their said Licence a provisos ys contained that if any abuse or Inconvenyence growe that then the Lord Treasurer of England for the tyme being shall reforme & order the same Ytt maye please your good Lordshippe to take such order in the premisses as your honour (regarding the Inconvenyence aforesaid) shall thinke the necessitie of that cause requireth & your Lordshippe suppliants & all their successors & posteritie shall be bounden to praye to almightie god for your good Lordship.

An endorsement on this petition runs as follows:

'The 21 Jan. 1592[-3]. The petitioners being the whole Companie of Horners of London Complayne that whereas they & their predecessors have alwaies heretofore bought all manner of Hornes & wrought the best to serve in this Realme & have sold the refuse & some of their wrought wares as blowing hornes shoe hornes & Lantern hornes both to Englishe & Strange merchants But nowe Mr Symon Furner a merchant & John Crafford a Scrivenor have gotten a Lycence from Her Majestie for transporting of Hornes & theirby have not onlie restreyned the petitioners from their former traffique to their undoynge in general but also theirbie greatlie endamaged the Queens Majesty in her Custome almost subvertynge the same for whereas heretofore her Majesty had xviid custome for every thousand of hornes they will suffer none to pass unlesse they have xd more to themselves for every Thousand which untollerable imposition taketh away traffique & so consequentlie her Majestie Custome besides the undoynge of

petitioners. There is a proviso in their Licence that if any abuse or Inconvenience growe thereby That then the Lord Treasurer of England for the tyme being shall reforme & order the same The petitioners praye your Lordship to order the matter as the equitie & necessitie of the case requireth.

Also there is a proviso in her Majesties graunte that the Horners shall have there anciant liberties there hath been tyme out of mynde & the Statute dothe allow them the like Therefore They humble pray your Lordship letters to the Customes that they maye enjoye this there former liberties as in equity they oughten.

As this petition did not meet with encouragement, the Company made another effort to obtain a recognition of their rights, which apparently met with better results.

'To the Right Honble Sir William Cecil Knight Lord High Treasurer of England. Most humble sheweth your good Lordship Ye companie of Horners that when your suppliants have free libertie by the lawes, statutes of this realme & accordinglie have used to transport beyond the seas all refuse hornes & for that purpose have now entered into ye Customes Booke readie to be transported a certaine number of reffuse hornes & noe other but ye Customes by the threateninge of one Simon Furner & John Crafford patentees of Her Majestie for transporting of hornes doe restraine your suppliants said hornes & denie them to transporte the same without your Lordship's warrant thereunto howbeit they are persuaded as well by ye sight of an Acte of Parliament made for your said suppliants by a proviso most favorably added & contained in her Majesties said patent to the said Furner & Craford that your said suppliants may lawfullie as aforesaid transport the same Yt may therefore please your good Lordshippe of your accustomed favour to poor decaied companies to vouchsafe your Honours letters to the officer of ye Custome house in favour of your poore suppliants that they may traffique these said goods Soe shall your poore suppliants as ever heretofore most especiallie praie the almightie for your good Lordship in all honor long to continue.'

The endorsement is as follows: 'To the right Honble The lord Highe Treasurer of England. The Companie of Horners For the transportinge of Horns 1592/1593,' and in pencil is added: 'Ordination de Horners.'

Matters proceeded slowly in those days, and unless the date endorsed is quite wrong, it would seem that no steps were taken to relieve the Company until 1596, when Sir Robert Cecil instructed one Richard Carmarthen to look into the matter and report to

him on the rights of both parties in this quarrel. His report was addressed to 'The right Honorable the Lorde hyghe Treasurer of England.' The endorsement is: '9 Jan. 1597[-8] Mr Carmarthen to my L[ord] Touching the Company of the Horniers & the patentees for transporting Hornes 1597/1598.'

'My dute to your Lordship humblie remembered Where by your Lordships letters of the xviith of December last your pleasure was I should call before me Mr Furner & Crayford with some of the Companie of ye Horners & to understand what can be alledged on boethe parts touching the Lyberty of the Horners by theyr Charter, or ye proviso of Crafford patent to transport hornes beyond the Seaes as freely as Furner & Crayford maye. And to ende the question betweene them if I could, or else to lett your Lordship understand my opinion what I conceave fitt to be don therin. I have endeavoured to ende the Question between them but cannot. The question resteth upon one word cheefly in thyr charter where they desiered of their Kinge that they might first have lybertie within the Cittie of London & xxiiii myles about to chuse & buye the principallest hornes before Ye Strangers shall buye & transporte any. And thereafter the Companie are so furnished. It shal be lawfull for them and all other persons to buy & transport the rest. Now the Horners conster the word them to pertaine to theyr Company Furner & Crayford conster the word them to pertaine to Ye Strangers & all other persons upon Theyr sute by the Kings grante in theyr Charter first forbidden which if it so be then have the Horners no more Libertie now to transport then the Strangers & all other persons have who are all inhibited by Her Majesties grante of Lycence.

Wherefore being no Lawier I darent presume to judge of the worde, Doe therefore humblye leave it to Your Lordships better Judgement & doe so humblye crave pardon of Your Lordship Whom God long preserve. London the ix of January 1597[-8]. Yours Lordships Humblie at Commandment.—Richd. Carmarden.'

Immediately after this follows an entry written in French and Latin, which cannot be later than the time of Henry VIII., and might easily date back to the reign of Henry VII. This document relates exclusively to the Bottlemakers, and is a copy of Orders made in the forty-seventh year of the reign of Edward III., 1373, and states that as 'some of the said crafte make false bottels, as it appeareth by their workemanshippes to the great damage of the Lordes & Comons & to the slaunder of the same good folkes, that two or three of the said crafte be elected to rule the Crafte well & surely.'

This petition was granted on condition that every bottlemaker from that time forward should put his sign on every bottle, 'that it may be known whose work it is'. After this we have another entry of the fact that, 'The bottellmakers have continued in the Company of Horners a hundred fourescore nine yeres & nine monthes, wrytten the last daie of November Anno Dñi One thousand five hundreth & fiftie & seaven'. Following the above another version of this document in French and Latin appears next, together with a translation of the same.

The volume concludes with an account of how in 1635 the Company, having fallen upon evil days, had applied to the Mayor and Aldermen to give them fresh rules for the 'reformation of the Crafte'. The Court directed Sir William Acton, Aldermen Backhouse, Smith, and Andrewes, Messrs. Stone and Pheasant, or any four of them, to consider the terms of the petition, and to report. Alderman Smith and Mr. Stone seem not to have taken any part, but the remaining four reported favourably, and the following rules were confirmed by the then Lord Mayor, Christopher Clitherow :

1. Horns to be bought for the general good.
2. None to buy horns within 20 miles of London.
3. Every one to pay for his share as the wardens think fit.
4. None to keep above one apprentice, except he hath been a partner or sharer with the said company seven years at least, in which case he may keep two.
5. Apprentices shall be bound.
6. No one to be set to work at the trade unless he have served seven years.
7. Every journeyman to serve two years after being made free of the Company.
8. None to enter for their shares until called by the wardens.
9. Any one elected a warden must serve, or pay a fine of 20 shillings.
10. None shall sue or arrest another without the permission of the wardens.
11. Power given to the wardens to commit offenders to prison with the consent of the Lord Mayor.

The volume ends with the names of the two wardens for the year 1635, viz. Robert Dix and Thomas White."

The TREASURER remarked that the Horners' Company had an early origin, and went on for centuries without being incorporated. It never had a hall, but probably existed before 1376, and was only incorporated in the reign of Charles I. The Horners' chief and legitimate object was to protect their own trade; and

their income was at one time under £100 yearly, the only piece of freehold property held by the Company having been sold.

ARTHUR F. LEACH, Esq., M.A., F.S.A., read a paper on the connexion of the present St. Paul's school with the old cathedral Grammar School of St. Paul's.

He began by showing that, according to canon law, which the twelfth-century compiler of the "Decretum" traced back to the year 824, and which was certainly the practice as seen in the school of York in at least the year 731, as sung by Alcuin, every cathedral church was bound to maintain a grammar school. The beginning, therefore, of St. Paul's school was to be sought in the beginning of the cathedral foundation. But the earliest extant proofs of its existence are two documents, the originals of which, as well as copies in a thirteenth-century chartulary, are still among the muniments of St. Paul's Cathedral. One of these is a charter of the Bishop of London, Richard I. de Beimes, of about the year 1111, informing the Chapter of St. Paul's that he has confirmed to Master Hugh the schoolmaster and his successors *ex officio* the station of Master Durand in the angle of the tower, where the school still stood in Colet's time, and within a few yards of which Colet began his new "scole of Poules". The same charter made the schoolmaster *ex officio* librarian, and directed him to get in all the books which had been out on loan, whether books of divinity or secular learning, and deposit them in some new aumbries by the high altar, which the bishop had had made for the purpose. By the second charter, about 1125, the bishop gave further endowment (including the tithes of Ealing) to Master Henry the schoolmaster, pupil of Master Hugh, to whom he granted "St. Paul's school as honourably as the church ever held it at its best and most honourable state". In 1138 Bishop Henry of Blois, as acting Bishop of London, enforced Master Henry's monopoly of school-keeping in London, directing the archdeacon to excommunicate any one who, without the licence of Henry the schoolmaster, taught school in the City, except the two other privileged schools in the royal college of St. Martin-le-Grand, and the Archbishop of Canterbury's peculiar of St. Mary-le-Bow. The famous "Description of London" by Fitzstephen, Becket's biographer, with a long account of the learning and the games of the schoolboys, was then cited, and his express statement that Becket attended the school of the City, *i.e.* St. Paul's. About 1205 the schoolmaster changed his title to chancellor, and then restricted himself to theological lectures. But he continued to supervise the Grammar School and appoint its master, as the "customs" written down about 1250 by Dean Henry of Cornhill, and the statutes collected about 1308

by Bishop Baldock, showed; while the precentor supervised the Song School, and appointed its schoolmaster, the master of the choristers, with which the Grammar School has been persistently confused. In the fourteenth century this last school became known as the Almonry School, the eight choristers in it, though others also were admitted to it, being lodged in a house on the north side of the cathedral under the care of the *Elemosinarius* or Almoner. It was shown that at the end of the fourteenth century and the middle of the fifteenth the monopoly of St. Paul's school was attacked, and two other schools were added about 1447, in St. Anthony's Hospital (on which John Stow enlarges, and to which he probably himself went) and in St. Dunstan's-in-the-East.

Mr. Leach then regretted that the destruction of the Chapter Acts or Minute-books prevented any continuous history of the old school, such as exists at York and Lincoln, though one or two casual notices of St. Paul's schoolmasters during the later fifteenth century have been collected by Dr. Lupton in his "Life of Colet". He showed, however, from the "Book of Evidences" collected by Colet and given by him to the Mercers' Company, that Colet began to build the new school in 1508, and finished it by 1510, when he began the head master's house adjoining it, and in 1512 "full accomplished and finished the same". Documents cited from the same book showed that Colet began the legal foundation in 1510, obtaining from the Chapter and the Chancellor of St. Paul's a grant of the old Grammar School buildings and the shops under them, also of all the rights and privileges of the masters of the old school, including a stall in the choir; while they took Master William Lyly, the first master of the new school, into their body, and gave him all those rights, including the stall, though he was a layman, "so long as he appeared in a decent surplice". Colet also asked the Pope for a confirmation of the grant of the rights of the old school, and the exemption of the old-new school from the Chancellor's jurisdiction, though (imitating a long succession of London citizens from 1437 onwards, including a former Mercer in 1443) he made a City company, a lay body, the governors, instead of his own ecclesiastical colleagues, the Chapter, a striking prelude to the coming Reformation.

Mr. Leach, in conclusion, claimed that the inference of the continuity of the Coletine school with the old school was irresistible; and remarked that a history of the school which had just appeared had endorsed his view.

Mr. M. F. J. McDONNELL agreed that the school, as founded by Dean Colet, was in existence before 1510. Various authorities date its foundation 1508-10, but those who carry most weight are agreed on 1509. In the speech delivered by the boys of the school

at the coronation of James I., it was stated that the foundation dated from the reign of Henry VII. (hence before April, 1509). Another piece of evidence was the grant of a manor dated 1st July, 1509, and a letter from the founder to the first high master, dated 1st August, 1509, though in one edition the date is given as 1510, no doubt because a stroke had been dropped out of the Roman numerals. Further, Ainsworth the priest is stated, in the depositions taken on his arrest, to have been maintained for six or seven years in Mr. Lyly's school by the princess dowager, Katherine of Aragon, and the fact that he stayed six or seven years shows that he was at the school founded by Colet, and cannot have been sent in 1509 to any school but that. Many documents quoted in his book on St. Paul's school were common property, being printed in several places; but two had been derived directly from Mr. Leach, viz. an application for a papal bull, and the grant by the Dean and Chapter to Mr. Lyly of the privilege of a seat in the choir stalls. The source had not been disclosed in either case, but it was on these two documents that the whole discussion rested, as between the ancient Grammar School and Colet's foundation.

Mr. SEATON was anxious to prove that the school did not exist before Colet's time, but would be the first to welcome evidence that it was older. Mr. Leach had against him the tradition of 400 years, and must expect opposition to his views. Colet always called it St. Paul's school, though it was dedicated to the Child Jesus. The transfer of the grammar schoolmaster's rights to William Lyly was not inconsistent with the starting of a new school by Colet. Mr. Leach contended that the old school was taken over as a going concern, but it was more natural to suppose that what was said to be of no importance was the building, not the foundation. Colet always spoke of himself as the founder of a new school, a description that does not suggest the appropriation of an old foundation. It was inconceivable that a continuation of the Grammar School should be known as Jesus School. The question is to decide in what the identity of a school consists. St. Paul's school had a new site and an entirely new government placed in the hands of the Mercers. In modern times the identity of a school remains even after a reconstruction by the Charity Commissioners.

Dr. FURNIVALL said there was no question that Colet founded a new school, but he got a transfer of the rights of the old school; and having new ideas about education, he acquired for his new foundation a certain character and sense of continuity by amalgamating the old with the new. There had been till now complete ignorance of early English education, and Mr. Leach had done

more for the subject than anyone. St. Paul's was specially interesting as being probably the school attended by Chaucer.

Mr. LEACH replied that the six or seven years mentioned by Mr. McDonnell were too vague to be good evidence of date. Colet began to build in 1508, as was shown in the report to which he referred. The question of a new foundation was indeed a matter of words. He had shown that the school had been a grammar school of very ancient date, which had been called a school of no importance by Colet, but was used by the Dean to give a flavour of antiquity to his own foundation. The endowment of the old school was £5, that of Colet's school £53, so that he might well call himself the founder. He also did a bold thing in taking the management from the Dean and Chapter and transferring it to a lay body. Was he an innovator? At least three or four city companies were governors of schools before his time, and the Dean was merely following precedent, the general movement dating from the time of Henry VI. He had shown there was a pre-existing St. Paul's school, which was granted to Colet with the Pope's sanction. To this building and small endowment Colet added considerably, and called the result a new school. He was also the first to introduce Greek into any school statutes.

The PRESIDENT considered that Mr. Leach's main arguments had been maintained, and the difference in terms might ultimately be adjusted. In his opinion lustre had been added to the school by this proof of its greater antiquity, and those connected with the foundation should be grateful for this new information.

Mr. Leach's paper will be printed in *Archæologia*.

Thanks were ordered to be returned for these exhibitions and communications.

THURSDAY, 2nd DECEMBER, 1909.

CHARLES HERCULES READ, Esq., LL.D., President,
in the Chair.

The following gifts were announced, and thanks for the same ordered to be returned to the donors:

From Viscount Dillon, F.S.A. :—Armour and weapons. By Charles Foulkes, 8vo. Oxford, 1909.

From the Author :—The evolution of Italian sculpture. By Lord Balcarras. 8vo. London, 1909.

From the Author :—Shropshire grants of arms. By Rev. W. G. D. Fletcher, M.A., F.S.A. 8vo. Oswestry, 1909.

From E. C. R. Armstrong, Esq., F.S.A. :—Royal Irish Academy Collection. Guide to the Celtic Antiquities of the Christian period preserved in the National Museum, Dublin. By George Coffey. 8vo. Dublin, 1909.

From G. F. Hill, Esq. :—Rubbing of inscription in Elgin cathedral church on the tomb of the first Earl of Huntley, 1470, with Arabic numerals.

From Max Rosenheim, Esq., F.S.A. :—A set of 42 pictorial postcards representing the heraldry in Lincoln Minster.

A special vote of thanks was also passed to the Royal Archaeological Institute for its kind gift of the following :

1. Relief wax portrait of Charles Tucker, Esq., F.S.A. By R. C. Lucas.
2. Engraved portrait of Sir J. P. Boileau.
3. Engraved portrait of Lord Talbot de Malahide.
4. Engraved portrait of Spencer Joshua Alwyne Compton, Marquis of Northampton.

The following were admitted Fellows :

Captain William Geoffrey Probert.

The Hon. Mr. Justice Joyce.

CHARLES H. READ, Esq., LL.D., President, read a paper on a Byzantine twelfth-century Reliquary of the True Cross in the form of a triptych, with Flemish enamels, from Stavelot, exhibited through him by Messrs. Durlacher Brothers.

The triptych had been in the possession of a family named Walz at Hanau, near Frankfort, for about a century. It had been left in their possession by the last Abbot of Stavelot, Coelestin Thys, who, fleeing from his abbey owing to the Napoleonic wars, had taken with him a number of the treasures from the church. The abbey was known to have contained a great quantity of relics, and to have possessed a magnificent retable containing the shrine of the patron saint Remaclus. This and many other adornments were due to the piety of the Abbot Wibald, a truly remarkable character, who lived in the twelfth century. He made two journeys to Constantinople, and on one of them brought back with him these relics of the True Cross, a gift from the Empress. He caused them to be enshrined in a gorgeously enamelled triptych, decorated with champlevé enamels of unusual beauty ; three circular medallions on each wing of the triptych represented the story of the Invention of the Cross and the conversion of Constantine, in the style of the similar enamels on the shrine of St. Heribert at Deutz, opposite Cologne. All this was the work of the Walloon goldsmith Godefroi de Claire, who worked on the Meuse and the Rhine at this period, and appears to have been often em-

ployed by Abbot Wibald. The actual relics, a portion of the wood of the Cross and a fragment of a nail, are framed in small triptychs fixed to the middle panel of the large altar ornament. Their principal decoration consists of Byzantine cloisonné enamels in gold, with figures of saints, doubtless brought back from Constantinople by the abbot as fitting adjuncts to such precious relics. The arrangement of these panels as they stand at present is, however, by the hand of Godefroi de Claire.

LORD BALCARRES observed that the triptych could not be in its pristine condition, the upper relic occupying too prominent a position, and the lower being exposed to the touch of the hand, as was most unusual at that period. Placing the nail at the foot of the cross was an odd realistic touch, but there again something to cover it seemed to have disappeared. The cross paty over the middle of the True Cross fragment was also a subsequent addition, being otherwise meaningless and a breach of veneration. It was incredible that the central panel was originally made for two reliquaries to be nailed upon it, nor would the abbot who gave the commission have been content with the existing scheme. The number of small cabochon stones set upon the backgrounds was unusually large; and he saw no reason why the two inner pillars should be oxidized and the outer clean, if it was not due to recent cleaning. He regarded the six roundels as the cardinal feature of the triptych, the Battle of the Bridge being exceedingly realistic for 1150. Though that roundel was in advance of its time, there was nothing in the others suggesting a knowledge of anatomy. The enamel colours were fine and varied, and their condition exceptional.

MR. ROSENHEIM remarked that the reliquaries had obviously been mounted in a different way originally, and the present background was comparatively modern. The mounting had been probably like that of the two wings, the ground filled with precious stones.

THE PRESIDENT replied that the central panel was obviously not in its original condition, and the picture of a similar triptych, exhibited from the Victoria and Albert Museum, showed how the panel was probably intended to look. The Benedictines described figures of Constantine and Helena in attitudes of adoration towards the relic, and the present work was no doubt by the same master as the triptych they saw at Stavelot. Another point should be noticed with regard to the enamelling. Some of the colours were not opaque but translucent, notably the fire in the roundel at the bottom of the right wing; and it was permis-

sible to regard that kind of enamel as inspired by early works of art brought from Constantinople. The font in which Constantine was being baptized on another roundel was evidently meant to be porphyry, and variegated enamel of that kind was rare and remarkable. In his handsome book on German enamelling, Dr. Falke, of Berlin, had included the products of Godefroi de Claire, who was a Walloon, and worked as much on the Rhine as on the Meuse.

The President's paper will be printed in *Archaeologia*.

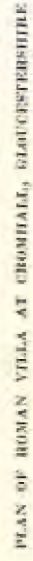
EDWARD CONDER, JUN., Esq., F.S.A., communicated the following notes on the Roman Villa at Cromhall, Gloucestershire :

"By the courtesy of the Earl of Ducie, I have the honour of laying before you the plan of a Roman villa, which was excavated many years ago in the parish of Cromhall, on part of his Tortworth estate. The site of the villa is in a field to the south-east of Priest Wood, which will be found on the 6-inch Ordnance Survey Map (1886), sheet no. 63 NE.; latitude, 51°36 degrees; longitude, 2°27 degrees W.

In 1852, after a long drought, Lord Ducie noticed in this particular field some well-defined outlines of an apparent building. A slight removal of earth yielded one or two tiles, and the existence of certain foundations was noted, but no further examination could then be made.

In the summer of 1855, Lord Ducie carried out a thorough investigation of the site, and as a result he was fortunate in unearthing the foundations of the villa now under consideration. The work was undertaken and completed in good weather, and the greatest care was exercised in observing the lines and thickness of the walls. All the surface soil below the turf was riddled through a fine sieve, in order that nothing in the shape of small coins, or fragments of bone or pottery, should escape notice. When the ground-plan was entirely exposed, Messrs. Foster and Wood, architects, of Bristol, visited the works, and in October of the same year they made a plan and sections, copies of which are now before you.

The principal 'finds' were recovered from the square room marked X on the plan. They are now preserved in Lord Ducie's private museum at Tortworth Court, and a list of them is appended to this paper. It will be observed that the plan shows a building of some considerable size in the shape of the letter L, facing SSE. The dimensions of the long and short wings are 195 feet 6 inches and 126 feet respectively, with an average width of 47 feet. The outside passages are 10 feet wide, leaving the inside rooms about 20 feet in width, but in length these rooms vary considerably. Beginning at the east end, they measure 45 feet





2 inches, 37 feet 5 inches, 14 feet 6 inches, 22 feet 10 inches, 22 feet, 12 feet 9 inches, 6 feet 2 inches, and 19 feet 10 inches. The west wing contains four inner rooms 20 feet 5 inches wide. Beginning at the south, they measure 21 feet 6 inches, 26 feet, 20 feet 4 inches, and 25 feet, and the two rooms projecting through the passage towards the east measure 20 feet 4 inches by 16 feet 3 inches. In the rooms marked T P the remains of tessellated pavements were found, and in the rooms marked P plain stone paving had been used. From these remains we may presume that the principal lodging rooms were at this end of the villa, but at the same time the position of a small hypocaust H at the extreme end of the longer half may be noted. This hypocaust contained the remains of three rows of *pilae*, and was stoked from A, a roughly-built stokehole, where the stain of wood ashes was observed. Attention should be directed to the foundations of a building to the south, marked S on the plan. This is in the form of a parallelogram, situated 149 feet from the end of the longer half, and from the projections at the foundations it appears to have been connected with the main building by an enclosing wall. If this was the case an irregular four-sided courtyard would have been formed with an entrance about 60 feet wide. The projecting square room at the south end of the villa would have served if necessary as a porter's lodge.

The position of the villa is one that would meet the requirements of a modern dwelling-house. Built on ground sloping slightly towards the south-east, it is well protected from the prevailing west and north-west winds by higher ground rising somewhat abruptly. Below the site, at less than 200 yards distance, is a small rivulet, which formerly may have been a considerable stream, yet hardly large enough to warrant the belief that any manufacture or business such as a *fullonica* could have been carried on here, as has been thought possible at Chedworth¹ in this county. From the proximity of the villa to the junction of the Roman road from Gloucester to Bristol, part of the western trackway with portion of the Icknield Street which passed through this parish to the ferry across the Severn at Aust, it is possible that these buildings may have had some connexion with the posting service which the Roman occupation of the country rendered necessary.

Samuel Rudder, whose History of the County of Gloucester was published in 1779, mentions under Cromhall Parish a British camp known as Bloody Acre, and was under the impression that it was a Roman station. He says: 'There are the remains of a strong encampment in Cromhall Park, where it may be supposed soldiers

¹ Notes on some probable traces of Roman Fulling in Britain, by Geo. E. Fox, F.S.A. *Archaeologia*, lix. 207-38.

were posted to protect the road. That this was a Roman work is pretty certain, from some coins which have been found, and from a tessellated pavement some time since discovered there, about eighteen feet long and fifteen broad, composed of small cubical bricks or stones of various colours set together with a strong cement.¹ This camp is known as Bloody Acre,² and is about one mile north of the field where the villa is situated.

On the 6-inch Ordnance Survey Map (1886) the date of finding a tessellated pavement at Bloody Acre is marked 1868. Lord Ducie is not aware of any such discovery there in that or any other year. Possibly the mistake of the site and date is due to the paragraph in Rudder's *History*, and the date may be intended for 1768. The remains of a mosaic pavement found in the room marked T P on the plan, which room measures 20 feet by 16 feet, make it probable that this villa was previously opened out in part, some time about the year 1768, and that the pavement noted by Rudder was then found.

I would mention in conclusion that no trace of the villa remains, as after the plan was made the foundations of the walls were removed. I am glad, however, of this opportunity of recording the foregoing particulars.

ADDENDA.

Roman remains found at Cromhall Villa, now in the museum at Tortworth Court :

Pottery—Fragment of Samian ware.

Black rough ware.

Part of a flat dish.

Several bottle necks (earthenware).

Odd portions of cups or pots (earthenware).

One whorl (?).

Part of a flanged tile.

Bronze—Several rings and portions of brooches.

Glass—One small piece.

Bones (animal)—Jaw bones and teeth.

Tusks of pig.

Antler (red deer).

Two stone rubbers, and a score or so of small bronze coins, the faces almost obliterated.

The objects found were small and not very important."

Mr. HORE thought that the hypocaust group comprised the baths, the hot and cold rooms being visible on the plan. One of

¹ Rudder's *History*, 397.

² *Archæologia*, xix. 164.

the wings of a Roman villa almost invariably terminated in a set of baths. The present villa was perhaps never completed, and did not compare with those at Woodchester and Chedworth.

Thanks were ordered to be returned for these communications.

THURSDAY, 9th DECEMBER, 1909.

CHARLES HERCULES READ, Esq., LL.D., President,
in the Chair.

The following gifts were announced, and thanks for the same ordered to be returned to the donors :

From the University of Glasgow :—A history of the University of Glasgow from its foundation in 1451 to 1909. By James Coutts. 8vo. Glasgow, 1909.

From the Author :—The pulpitum and rood-screen in monastic and cathedral churches. By Aymer Vallance, F.S.A. 4to. London, 1909.

From W. H. Richardson, Esq., M.A., F.S.A. :—A history of Smithfield gate. By E. A. Webb. 8vo. London, 1903.

From the Dean and Chapter of Westminster :—The history of Westminster Abbey. By John Flete. Edited by J. Armitage Robinson, D.D., Dean of Westminster. 8vo. Cambridge, 1909.

The following were admitted Fellows :

Major Wilmot Vaughan.

Edward Milligen Beloe, Esq.

MAX ROSENHEIM, Esq., F.S.A., read a paper entitled "Notes on the *Album Amicorum*", in illustration of which he exhibited specimens of the sixteenth and seventeenth centuries.

Pointing out the fallacies of previous writers, who had stated that the album originated as early as the fifteenth century and had become fairly general by the time of the Reformation, Mr. Rosenheim showed by examples in his own collection and in the British Museum, and by references to the principal collections on the Continent, that the earliest dated only from about 1550, consisting at first of autographs only, collected by students at the universities, chiefly at Wittenberg, and gradually developing into the heraldic album. The earliest albums were made up of printed books, the favourite ones being Andreas Alciati's "Emblems", which were interleaved with blank leaves, on which the owner's friends and fellow students entered their mottoes, dedications, and signatures, sometimes accompanied by their coats of arms. Mr. Rosenheim enumerated and showed the illustrated books specially designed and issued for the purpose of an album from about 1560

to 1620, by such artists as "Le petit Bernard", Jost Amman, Tobias Stimmer, Theodore de Bry, and Johann Theodore de Bry. He also showed a number of sixteenth-century albums containing, in addition to the more or less elaborately painted coats of arms of the owner's friends, some paintings of miniatures and costumes, particularly interesting as bearing the monograms of the artists who painted them.

Amongst the albums of the seventeenth century Mr. Rosenheim pointed out that of Joannes Wiliczly, a Polish noble, containing the autographs of Scottish captains (dated at Selezen near Prague, August, 1620) who had come to the assistance of Frederick and Elizabeth, King and Queen of Bohemia; amongst them Sir Andrew Gray, with the motto "Plus tost que tard", and Sir James Ramsay, who afterwards became a noted leader under Gustavus Adolphus, with the motto "Jamais arriere".

Another album of interest to the student of English history, described in the Catalogue of the British Museum as that of Prince Charles Louis, afterwards Elector (but which Mr. Rosenheim believes to have at first belonged to the older brother and heir presumptive, Prince Henry Frederick, and only after his death in 1629 to have passed to Prince Charles Louis), contains the autographs of Charles I. and his queen Henrietta Maria, William Cecil Earl of Exeter, Frances Duchess of Richmond and Lennox, William Earl of Pembroke, George Villiers Duke of Buckingham, and other notable personages, accompanied by finely painted coats of arms, and dated from 1622 to 1633.

The autograph of Charles I. was pointed out in six different albums: in 1609 as "Ebor-Albanæ D.", in 1613, 1616, and 1618, with the signature "Carolus P.", but always with the significant motto "Si vis omnia subiicere subiice te rationi".

The latest album shown (1661-7) contains the autographs and coats of arms of Electors and Princes of the Holy Roman Empire, of the Papal delegate, and the ambassadors of the Kings of France, Sweden, and Denmark, attending the Imperial Diet at Ratisbon from 1662 to 1664.

In conclusion, Mr. Rosenheim drew attention to the names of great men whose autographs are to be met with in these albums, amongst them Theodore Beza, Carolus Clusius, Isaac Casaubon, William Camden, Galileo, Kepler, Giovanni da Bologna, Rubens, and last, but not least, Milton.

SIR RICHARD HOLMES had catalogued the collection of albums at the British Museum, and considered them a valuable asset. Mr. Madan had had the foresight to make the collection, and incurred a good deal of odium on that account. The albums were valuable and interesting as containing the autographs of

many distinguished people, both English and foreign; and the arms were in many cases not to be found elsewhere. In the Museum collection there were not many of the printed book type, the majority being signed by the owner's friends and their arms emblazoned in a fanciful way.

Mr. OSWALD BARRON remarked that the later degradation of the *Album Amicorum* might be traced further in two different directions; one was the lady's album of the nineteenth century in which verses were inscribed, signed and dated; the other kind was the autograph album, merging into the poetical birthday book. He considered that the possessor of the arms paid for their emblazoning in the album. Shields of arms in glass roundels made in Switzerland and Germany were similarly paid for by visitors when shown them by their host, who had remembered his friends when ornamenting his windows. Many of the coats in the albums belonged to the bourgeois class and were not in Rietstap or Siebmacher.

Mr. VAN DE PUT thought that though it had been suggested to translate many of the terms in foreign heraldry, they were best left in the original language. As so many of the arms were not otherwise recorded, he thought they might well be collected from the large number of albums in existence. One type in the collection at South Kensington had a woodcut at the top of the page and a blank left below.

The PRESIDENT pointed out that a paper on such a subject entailed a vast amount of labour, and was a serious contribution to mediaeval study, as these obscure coats of arms might furnish many a useful clue to the date and origin of works of art, the attribution of which was frequently a matter of contention. The slides which so admirably illustrated the paper were produced by the Lumière process, and gave the colours with sufficient accuracy. Thanks were due in this matter to Dr. Otto Rosenheim, who had prepared the whole series.

Mr. Rosenheim's paper will be printed in *Archaeologia*.

J. W. WILLIS-BUND, Esq., M.A., LL.B., F.S.A., submitted the following Report as Local Secretary for Worcestershire:

"As your Local Secretary I desire to call the Society's attention to three churches near and in Worcester."

1. The first is *Warndon*, the principal feature of which is the black and white tower, one of the few the restorer has left us. The patron of the living, Mr. R. V. Berkeley, of Spetchley Park,

a Fellow of the Society, was good enough to obtain the services of Mr. Harold Brakspear, F.S.A., and under his supervision the repair of the church has been carried out and the tower saved. Mr. Brakspear's report on the church says :

'The chief defect is the sinking of the whole of the west front owing to the sill pieces carrying the tower being perished through contact with the earth. The tower was supported by needles and struts, the old rough foundation removed, together with the perished sills, and the earth excavated to a width of $3\frac{1}{2}$ feet beneath the outside walls, until a suitable bottom was met with ; a foundation of Portland cement was then placed in the trench to a thickness of 18 inches, and a wall 14 inches thick of sound hard brick built to the under side of the sills ; various other repairs were effected. There are other features of interest in the church, an heptagonal font, a pre-Reformation bell inscribed *Sancta . . . ora pro nobis*, some fragments of coloured glass of the fourteenth century, some old tiles, and some scraps of woodwork. All of which will have to be watched when the general restoration which the incumbent says is necessary takes place.'

2. *Martley*. This church, which used to belong to the Abbey of Corneilles and afterwards to the Mortimers of Home Castle, is undergoing restoration. It has suffered so much on previous occasions that there is but little left to spoil. Outside there are two Norman doors, one of which is almost hidden by a modern porch. On the four corners of the tower are four urns in sandstone fixed in the latter part of the eighteenth century, which gave the church a peculiar appearance ; they are to be removed. Inside, on the south side of the altar, is an alabaster effigy of a man in armour said to be a Mortimer, which is not certain. The figure is to be moved and placed in the middle of the chancel.

3. *Little Malvern*. This is a church of very considerable interest, as it was that of the Benedictine House of Little Malvern, a cell to Worcester. It was founded in 1171. In this church there are some remains of stained glass and other interesting features. The present vicar intends to have a complete restoration. The bishop of the diocese formally approves of the proceeding, and has written a letter in favour of it, which is printed in the appeal for subscriptions.

The bishop writes :

'The Parish Church of Little Malvern is a highly picturesque building, and there is, I hope, no intention of modernizing it, but in many respects it is distinctly wanting in proper accessories for reverent divine worship. It is also needing some substantial repair if it is not to fall into progressive decay. A restoration on strictly conservative grounds is, in my opinion, desirable, and I trust the vicar will get the support he asks for.'

My colleague, Mr. William Pearce, F.S.A., went over and saw the church, and has written as follows :

‘ It is somewhat difficult to understand what is proposed. The church is at the present time in considerable danger from fire, as the stove and pipe are in a dilapidated condition, especially where the pipe is carried through the roof. The roof generally requires alteration. The old glass, which is very interesting, should be carefully re-leaded. It resembles some of the later glass in Great Malvern, and may be by the same artist. Arthur Prince of Wales, his wife Katherine of Aragon, and his mother Elizabeth of York, are all represented. Also some glass, probably given by Bishop Alcock previous to his translation to Ely in 1486, as his arms appear in a shield. At present the glass is insecurely fixed in the windows. It is impossible from the circular to gather what treatment is proposed for the rood-screen and what restoration is contemplated. A new sacristy is referred to, but it is not stated if this is to be an addition to the existing church. The fabric of the church generally certainly requires judicious repair, but from the terms of the circular much more than this seems to be aimed at. The matter deserves the attention of the Society.’

ST. SWITHUN'S CHURCH, WORCESTER.

The Worcester city churches were all injured during the Civil War, and several of them, among others All Saints, St. Nicholas, and St. Swithun, were rebuilt in the eighteenth century, all in the classic style, and of this they are good examples. All Saints was modernized within the last twenty-five years, and St. Nicholas at an earlier period to suit the nineteenth-century taste, so of the Worcester city churches St. Swithun's alone remains a typical example of the eighteenth-century style. It is now proposed to restore it, and thus to do away with the last specimen of this type of church in the district.

St. Swithun's Church was rebuilt in 1736 by White, a pupil of Sir Christopher Wren. Its characteristic features are the internal oak fittings, a three-decker pulpit with sounding-board surmounted by a pelican, fine oak wainscot pews, a west end gallery for the choir, and a communion table consisting of a marble slab on wrought iron supports. The marble slab is a peculiar feature of Wren's time, imitated by his pupils, but placed on wrought iron supports and not on wood frames. The pulpit is placed to the south of the middle aisle, an unusual position for that time.

It is proposed by the rector and churchwardens to spend a sum of about £3,000 in repairing, restoring, and altering the church. The exact details of what it is proposed to do cannot be ascertained, but it is believed they consist in doing away with the

marble communion table, having a surpliced choir in the small chancel, thus causing alterations there, and adding a choir vestry and a procession way, or external ambulatory. It is also feared that the old oak pews may be sacrificed.

It is not disputed that the church requires repair. It has been closed for some time, and the roof wants attention; the floor ought to be relaid on a new foundation, the walls and glass need repair, and the pews might be somewhat lowered. All this work could be carried out at a very moderate cost, and the distinctive features still be retained. Mr. Weir has examined the church on behalf of the Society for the Protection of Ancient Buildings, and his report states that all that is required can be done for £750, instead of the £3,000 the rector and churchwardens propose to spend. What is objected to in their proposal is the alteration of the church under the name of restoration, so as to render it an ugly nondescript without any character, and quite alien to the period in which it was built. It is not contended that eighteenth-century ecclesiastical architecture is itself beautiful, but it is contended that such architecture represents a school of thought in the Anglican Church, specimens of which, both for the sake of national and local ecclesiology, should be preserved.

The parish possesses considerable property, and one moiety of the rents of some real estate, the leases of which are about to fall in, is payable to the rector and churchwardens for the maintenance of the church. The rents of the property when re-let are expected to realize some tenfold the amount at present received, estimated at £80. The money for the proposed alterations is thus ready to the hands of the rector and churchwardens.

Unless public opinion is very strongly brought to bear on the subject, the proposed alterations will be carried out. A protest has been sent to the Bishop, who has acknowledged its receipt. The parishioners seem careless in the matter, as they do not attend the church, and it is reported that an appeal has been made to them for money to carry out the alterations without eliciting any response. The patrons, the Dean and Chapter, make no sign, and the matter therefore rests with the present office holders to transform the church from a typical building of a particular period into a nondescript church which will be absolutely meaningless."

In conclusion Mr. WILLIS-BUND moved the following Resolution, which was seconded by the Treasurer and carried unanimously :

"That the question of what steps should be taken to preserve the characteristics of St. Swithun's Church, Worcester, be referred to the Council.

That the Council be requested to consider whether it

is desirable to take any steps in cases where parochial charities applicable to the preservation of the fabric are devoted to other matters connected with the church."

Thanks were ordered to be returned for these communications.

THURSDAY, 13th JANUARY, 1910.

CHARLES HERCULES READ, Esq., LL.D., President,
in the Chair.

The following gifts were announced, and thanks for the same ordered to be returned to the donors :

From the Author :—The history of the King's Body-Guard of the Yeomen of the Guard. By Colonel Sir Reginald Hennell, D.S.O., F.S.A. 4to. Westminster, 1904.

From the Author :—The nave of Westminster. By R. B. Rackham. Communicated to the British Academy by the Dean of Westminster. 8vo. London, 1909.

From Richard Bentley, Esq., F.S.A. :—Early exhibitions of art in Liverpool. By Joseph Mayer. With some notes for a memoir of George Stubbs, R.A. 8vo. Liverpool, 1896.

From the Trustees of the British Museum :—Medallic illustrations of the history of Great Britain and Ireland. Plates lxxi-cx. Fol. London, 1908-9.

Special votes of thanks were accorded to the editors of *The Athenæum*, *The Builder*, and *Notes and Queries*, for the gift of their publications during the past year.

Arthur Francis Gresham Leveson-Gower, Esq., was admitted Fellow.

This being an evening appointed for the Election of Fellows, no papers were read.

The Ballot opened at 8.45 p.m. and closed at 9.30 p.m., when the following were declared duly elected Fellows of the Society :

Robert Henry Forster, Esq., M.A., LL.B.

Colonel Francis Randle Twenlow, D.S.O., B.A.

James Crofts Powell, Esq.

Rev. Edward Earle Dorling, M.A.

Herbert Millingchamp Vaughan, Esq.

Lieut.-Colonel George William Archer, R.E. (retired).

Arthur Gardner, Esq., M.A.

John Diblee Crace, Esq.

Lieut.-Colonel Henry Walter Morrieson, R.A. (retired).
William Parker Brewis, Esq.
Richard Frederick Ernest Ferrier, Esq.

THURSDAY, 20th JANUARY, 1910.

WILLIAM GOWLAND, Esq., F.R.S., Vice-President,
in the Chair.

The following gifts were announced, and thanks for the same ordered to be returned to the donors :

From the Author :—*Eleanor of Castile, Queen of England : and the monuments erected in her memory.* By James Galloway, M.D. 8vo. London, 1909.

From Lieut.-Col. Lyons, F.S.A. :—*Quaint old English pottery.* By Charles J. Lomax. With preface by M. L. Solon. 4to. London, 1909.

A special vote of thanks was accorded to Max Rosenheim, Esq., F.S.A., for his gift of two heraldic manuscripts of late sixteenth-century date, viz. :

1. A collection of coats of arms of kings, nobility, and gentry of England, emblazoned in colours.
2. Creations of nobility with their arms emblazoned in colours.

James Crofts Powell, Esq., was admitted Fellow.

W. L. RUTTON, Esq., F.S.A., read a paper on the Manor of Eia or Eye next Westminster, with the Manors of Neyte, Eybury or Ebury, and Hyde.

Eye next Westminster, an obsolete and forgotten name, formerly represented the great manor which lay between the Tyburn and Westbourne streams, that is to say, between Westminster and Chelsea; the Thames bounded it on the south, and the highway, now Oxford Street, on the north. At the time of the Domesday Survey it was described under the name Eia as in possession of the Norman Geoffrey de Mandeville, and by him, for the repose of his soul and the burial of his body in the cloister of Westminster, it was granted to the Abbey. It is supposed that in course of time the great manor came to be divided into three lesser manors, viz. Neyte, Eybury, and Hyde, three substantial divisions. Mr. Rutton, however, showed that the limits of these three have never been defined, and that even the situation of Neyte has been a matter of speculation. He found also that the indefatigable archaeologist Sir Henry Ellis regarded Eybury as the developed name of the

great manor known formerly as Eye or Eia, and not merely as a division of it. This opinion is supported by the research now made. Eybury is found to designate the southern portion of the original manor approaching the river, and also the northern portion lying along the highway now Oxford Street.

Neyte is found to represent only the manorial seat with its five or six acres of surrounding land. It was called "La Neyte" and "Nete House", and its limited extent appears clearly in a lease of Eybury in which certain portions of it (namely, fields adjoining the manor house) are reserved for the Abbot's use; while it is also provided that certain produce of the surrounding manor should be carried "into the Manor of Neyte" for the use of the Abbot.

The history of Neyte Manor House is traced from the fourteenth century. In 1320 it is found to have been a *dépôt* for the King's cattle, though as such held at the will of the Abbot. The original house was probably rebuilt by Abbot Litlington after a storm in 1361 which destroyed several manor-houses pertaining to the Abbey. That it acquired a degree of stateliness appears in the fact that it was afterwards occupied on two occasions by Plantagenet princes, John of Gaunt and Richard, Duke of York. After the Dissolution it became a farm-house, and eventually a place of entertainment, in which character it was sought by Mr. Samuel Pepys. It probably stood until about 1720, and its site is now marked by "The Monster" public-house in Warwick Street, Pimlico.

Mr. WHEATLEY was specially struck with the idea that Neyte was merely a manor-house, as he had never found any other instance of this. There were in the paper many points of interest in connexion with London place-names, and he suggested that Hay Hill was derived from Eye.

Mr. HARDY paid a tribute to the patient industry of the author, and felt confident that the paper when printed would prove a valuable addition to London topography.

Mr. KINGSFORD referred to a Chronicle of London which recorded the removal of Eleanor Cobham to prison at Westminster in 1442 and her subsequent appearance before the Abbot at Neyte. She was accused of being a witch and conspiring with another to make an image in order to destroy the King.

Mr. PALEY BAILDON still thought that Neyte was a manor. In French documents *manoir* was used for a manor-house, but it was inconceivable that there should be manorial documents dealing with Neyte if it were only a manor-house. It might have seen

better days in the reign of Henry VIII., but he was convinced that Neyte was a proper manor. It had a bailiff, who was the officer of a court, manorial or otherwise, and could not be attached to a house. It was curious that no tenants of Neyte were mentioned in documents of Henry VIII., but that was not a vital point as the manorial system was breaking down. Tenants were being absorbed, and arable turned into pasture for sheep. There was also the question of 108 acres being attached to Neyte. The phrase "late in the tenure of Richard Walsh" did not necessarily mean that he was dead, but was probably due to legal caution. The derivation of "monster" from monastery or minster was grotesquely impossible. Neyte House was a possible name for a house where cattle were kept, but this interpretation did not apply to The Neyte.

MR. HARBEN said some of the author's conjectures were supported by documents not named in the paper. A Chancery inquisition *post mortem* of 17 Edw. II. (no. 43) mentioned 43 acres in Eye held of the King of his manor of La Neyte and Eghebury with suit at Eghebury court. This showed that La Neyte was something more than a mere manor-house; also, that no sharp distinction could be drawn between Eye and Eybury, which seemed to be names of the same thing, Eybury being the more modern. When a large manor was subdivided into smaller ones, the middle division usually retained the original name of the whole. In this case the manorial name persisted in the form of Eye or Eybury, and the two names occurred in the inquisition mentioned. There was a large number of manorial rolls in the library at Westminster, but he was not aware of any returns among them in respect of Neyte, which must have been of less importance or merged into a larger area. In the Westminster Abbey MS. 12348 *temp.* Edward III. it was stated that the Abbot had nothing in the parish of St. Martin's except in Eybury, which suggested that Eybury was used in a larger sense here; possibly in a loose sense for the larger manor, and sometimes for the manor which it included. The name La Neyte could never have had any reference to cattle, and the name Westbourne should be used with caution as there was no ancient authority for its use as the name of the stream.

MR. RUTON replied that as early as 1320 the bailiff of Neyte had fields in the manor of Eybury, and was the king's cattle bailiff. As to the derivation of "the Monster" (Pimlico), he preferred his own suggestion that one of the monsters exhibited in the tea-gardens kept by Nell Gwynne's mother had been preserved and utilized later as an inn sign. There was no clear evidence that three manors ever existed here, and the only puzzle was Hyde.

Mr. Rutton's paper will be printed in *Archæologia*.

Thanks were ordered to be returned for this communication.

THURSDAY, 27th JANUARY, 1910.

CHARLES HERCULES READ, Esq., LL.D., President,
in the Chair.

The following gifts were announced, and thanks for the same ordered to be returned to the donors :

From the Author :—The low side windows of Northamptonshire churches.
By C. A. Markham, F.S.A. 8vo. n.p. 1909.

From the Keeper of the Ashmolean Museum :—Summary guide to the
Ashmolean Museum. Printed for the Visitors. 8vo. Oxford, 1909.

From the Author :—Roman Britain (an excerpt from *The Year's Work in
Classical Studies*, 1909). By H. B. Walters, F.S.A. 8vo. n.p. 1909.

From the Author :—A batch of old deeds relating to Buckland Filleigh.
By Rev. O. J. Reichel, B.C.L., M.A., F.S.A. 8vo. n.p. 1909.

From the Secretary of the Royal Society of Arts :—Directory of the Royal
Society of Arts, founded 1754, incorporated 1847. Edited by Sir H.
Trueman Wood. 8vo. London, 1909.

From the Author :—"A Passel of Ould Traade," being sundry papers read
at meetings of the Penzance Natural History and Antiquarian Society.
By R. A. Courtney. 8vo. Penzance, 1909.

From Robert Rickards, Esq., F.S.A. :—Llandaff Records, vol. iii. Acts
of the Bishops of Llandaff, Books 2 and 3. Edited by J. A. Bradney,
F.S.A. 8vo. Cardiff, 1909.

From Harold Sands, Esq., F.S.A. :—

1. A short guide to the Castle of Lewes, published by the Sussex Archæological Society. 8vo. Lewes. n.d.
2. Two photographic reproductions of plates to supply the place of those missing in the Society's copy of Hicklin's *History of Nottingham Castle*, 1836.

From the Author :—Proper terms ; an attempt at a rational explanation of
the meanings of the Collection of Phrases in "The Book of St. Albans",
etc. By John Hodgkin, F.L.S. 8vo. London, 1910.

The following were admitted Fellows :

Arthur Gardner, Esq., M.A.

John Diblee Crace, Esq.

William Parker Brewis, Esq.

Lt.-Col. Henry Walter Morrieson, R.A. (retired).

Rev. Edward Earle Dorling, M.A.

On the nomination of the President the following were appointed Auditors of the Society's Accounts for the past year:

Horace William Sandars, Esq.
Leland Lewis Duncan, Esq., M.V.O.
Philip William Poole Carlyon-Britton, Esq.
William Howard Aymer Vallance, Esq., M.A.

SIR EDWARD WILLIAM BRARROOK, C.B., Vice-President and Director, submitted some Notes as to the Fellows of the Society who have held the office of Director.

The Directors were twenty-five in number, beginning with John Talman the younger, who was appointed when the Society was founded in 1717, was a capable artist, designed the Society's familiar emblems, and died at the early age of forty. He was succeeded by Samuel Gale, who held the office of Treasurer, and soon gave up that of Director to Simon Degge. He also died early, and was succeeded by Charles Frederick, afterwards Knight of the Bath and M.P. The Rev. Dr. Thomas Birch was the next Director. After long and valuable service he was supplanted in 1739 by William Bogdani, but returned to office the next year. He retired in 1747, being much afflicted in his eyes, but recovered sufficiently to hold the office of Secretary of the Royal Society from 1752 to 1765, and lived to write the biography of his successor in the office of Director, Dr. John Ward, Professor of Rhetoric in Gresham College. In Dr. Ward's time the Society obtained its charter, and all the then existing members were re-elected and enrolled as Fellows of the corporate body; but by some unaccountable oversight, Dr. Stukeley, the Society's first secretary, was not included in the number. That oversight was remedied as soon as discovered. The next Director was Dr. John Taylor, Archdeacon of Buckingham, who was succeeded by Dr. Gregory Sharpe, Master of the Temple. Richard Gough held the office for twenty-six years (1771-97), the longest tenure on record. He was succeeded by Samuel Lysons, who contributed twenty-eight papers to *Archæologia*. The next Director was William Richard Hamilton, who in early life had distinguished himself by obtaining from the French the Rosetta Stone, and transporting the Elgin Marbles to England. Matthew Raper held the office from 1811 to 1813, and was succeeded by Taylor Combe. Subsequent Directors were James Heywood Markland, John Gage (afterwards Rokewood), Albert Way, William Henry Smyth, Percy, 6th Viscount Strangford, Henry Ellis, Augustus Wollaston Franks, Charles Spencer Perceval, Henry Salusbury Milman, Harold, 17th Viscount Dillon, and Frederick George Hilton Price.

Many incidents in the career of the earlier Directors were derived from the manuscript minute-books of the Society, and the paper was illustrated by engraved portraits of several of them, kindly lent by the Royal Society for that purpose.

Mr. GOWLAND had nothing but praise for the elaborate paper read by the Director, which treated not only of the Directors, but also incidentally of the early history of the Society. He referred to the early use of Latin in formal documents, and deplored its neglect as a literary language at the present day. Another point of interest was the close connexion in early days between the Royal Society and the Antiquaries. With the recent growth of physical science a change had come about, and there was little room in the Royal Society for archaeology.

Mr. H. THOMSON LYON remarked that in recording the events of the past the Society seemed to have neglected its own history. To remedy this defect he hoped the Council would see its way to print the manuscript minutes, of which there were several volumes, and at the same time publish an account of its possessions and insignia. With regard to the last, there were still traditions that ought not to be lost.

Mr. REGINALD SMITH commended to the notice of the Director in his first year of office the care of the Society's collection of antiquities. By statute the Director and Secretary were jointly responsible for the custody of the museum, and it behoved the Society to make the utmost of its collection. At present the condition, arrangement, and labelling of the specimens left much to be desired, and for the credit of the Society, if not for its edification, a serious attempt should be made to bring the collection up to date. A catalogue was prepared by Mr. Albert Way in 1847, but little had been done since to bring home to the Society the value and interest of its archaeological possessions.

The PRESIDENT said the Society should ever strive after perfection, and the hint given to the Director would no doubt be acted upon. A catalogue of the Society's portraits was already being made by Mr. O'Donoghue. He had almost known Sir Henry Ellis and Albert Way, and had catalogued the latter's library for his family. He had clear recollections of Milman and Perceval as Directors, but was naturally more intimate with Sir Wollaston Franks, who had occupied the chair with such distinction, and had first instructed him in the business of the Society. The practice of dining together had not altogether died out, but

it was not so regular or so general among the Fellows as in the eighteenth century.

The Director's paper will be printed in *Archæologia*.

G. HARRY WALLIS, Esq., F.S.A., Local Secretary for Notts., exhibited two photographs showing the front and back of a sculptured stone lately found during building operations under the kitchen floor of a house in Low Pavement, Nottingham.

The fragment, which is about two feet high, is a portion of a cross with tapering shaft, having on one side Our Lord crucified, and on the other Our Lady and Child. The sculpture seems to have formed part of a churchyard cross, of late fourteenth-century date, that perhaps belonged to the adjacent church of St. Nicholas, destroyed in 1643.

The stone has since been acquired for the Nottingham Museum.

Thanks were ordered to be returned for these communications and exhibitions.

THURSDAY, 3rd FEBRUARY, 1910.

CHARLES HERCULES READ, Esq., LL.D., President,
in the Chair.

The following gifts were announced, and thanks for the same ordered to be returned to the donors:

From the Author, F. W. Bull, Esq., F.S.A.:

1. A history of Newport Pagnell. 8vo. Kettering, 1900.
2. A sketch of the history of the town of Kettering together with some account of its worthies. 3vo. Kettering and London, 1891.
3. Supplement to the history of the town of Kettering. 8vo. Kettering, 1908.

From the Author:—Bibliography of the West Indies (excluding Jamaica).
By Frank Candall, F.S.A. 8vo. Kingston, Jamaica, 1909.

Richard Frederick Ernest Ferrier, Esq., was admitted Fellow.

The following letter was read:

"Newby Grange, Crosby on Eden, Carlisle,
1 February, 1910.

DEAR SIR,

I am sending in a separate parcel a series of large scale drawings of plans and sections illustrating the excavations carried out under the superintendence of Professor Haverfield on the line of the Roman Wall from 1894 to 1903 inclusive, and I hope that

the Society of Antiquaries will be good enough to accept them so that they may remain on record in their library.

These plans and sections have been drawn from measurements and notes taken by Mrs. Hodgson and myself while the excavations were in progress. Most of them have been published, but on a small scale, in the Annual Reports made by Professor Haverfield in the Transactions of the Cumberland and Westmorland Archaeological Society, vol. xiii, old series, to vol. iv, new series, of which I believe that offprints have been supplied to the Society of Antiquaries, and also in some articles by Mrs. Hodgson in the same series of Transactions. In these the excavations will be found to be fully described.

We hope that they may be placed on record so as to be available for the use of any future explorers, and they are more likely to be accessible in the library of the Society of Antiquaries than among the records of a provincial society, which moreover has no home of its own.

Yours faithfully,

T. H. HODGSON, F.S.A.

President of the Cumberland and
Westmorland Antiquarian and
Archaeological Society."

The Assistant Secretary,
Society of Antiquaries,
Burlington House.



A special vote of thanks was accorded to Mr. Hodgson for his gift.

H. D. ELLIS, Esq., read the following notes on some further examples of the work of English provincial silversmiths in the fifteenth, sixteenth, and seventeenth centuries:

"Since I last had the honour of submitting for the Society's inspection some early English silver spoons,¹ made and marked in provincial towns of which no notice in connexion with antique silver plate had previously appeared, further prosecution of my research into the 'hinterland' of the silversmiths' craft has brought to my knowledge a number of other towns, many of them now of very humble rank, in which the manufacture of silver ware was carried on in the sixteenth century, and in some instances in the fifteenth century. As might be expected, this local activity was to a considerable extent initiated by the influx of foreign refugees, especially those from the Low Countries. The records of the Goldsmiths' Company of London in the fifteenth century abundantly show that the settlers in the Metropolis had then attained the proportions of a community which must be reckoned

¹ See *Proceedings*, 2nd S. xxi. 22-30.

with as a power in the City. In other parts of England, especially upon our eastern coasts, the constant influx was regulated by authoritative distribution of the settlers, in numbers limited to prescribed maxima, among certain specified towns. To each of these the new-comers brought their crafts, mostly textile, but, not inconsiderably, metallurgic also. Trade jealousies and competition not unnaturally produced strained relations between the native and the immigrant craftsmen, and in some cases the burgesses succeeded within a few years in obtaining the rescission of the licence to settle and in effecting the expulsion of the foreigners. Great Yarmouth is a noteworthy instance of this line of action. A licence to the Dutch to reside here was issued in 1570, and in 1574 they were ordered to withdraw. The eviction of the foreign silversmith before his industry could fairly take root may perhaps explain the fact that towns which in the sixteenth century were recognized as plate-working localities, and some of whose craftsmen's names are known, soon dropped entirely out of notice, and so far as the manufacture of plate, as testified by extant examples, is concerned, they have been dead for centuries. This, however, is the less to be wondered at when we recall the aurifabric (if I may be allowed to coin the word) history of some of the seven great provincial centres in which assay offices were appointed by Henry VI. These were York, Norwich, Newcastle, Lincoln, Bristol, Coventry, and Salisbury. Of the last two, no examples of plate are extant. Of Bristol, only one example as early as the Charles I. period can with any reasonable degree of certainty be ascribed. Yet, having regard to the wealth and importance of Bristol, once second in rank only to the Metropolis, can it for a moment be doubted that a large local demand was answered by an adequate local supply of manufactured plate? But its history is now dead and forgotten, along with that of many minor towns. It is some of these tombs of a departed industry that I now propose to reopen, and I trust that the disinterred bones may not prove quite too dry.

No. 1. A silver-gilt lion-topped spoon has the following marks on the back of the stem,  , and in the bowl, within a corded circle, a gateway with three domed towers. This is probably the town-mark of Totnes, as it is represented upon the fifteenth-century seal of the corporation of that borough, which has for device a triple-towered gateway. The maker's mark is that of Steven More, whose name is mentioned in official records, under the date 1571, in connexion with silver work of his then at Exeter. There is one other example of More's mark upon a communion cup belonging to the parish of Halwell (about five miles distant from Totnes, and in the direction remote from Exeter).

This cup bears the marks S MORE noted above, between which is a mark of quatrefoil character charged with a roundel upon each foil and a roundel in the centre. I possess another spoon bearing this quatrefoil mark, which I am as yet unable to locate, but am disposed to associate it with Dartmouth. Although More's work is mentioned in connexion with Exeter, there is no evidence that he was an Exeter man or a member of the local guild. The probabilities all point in negation of this theory, since upon neither piece of More's making is the Exeter town mark found, whereas it is the invariable rule to find it upon plate made by Exeter silversmiths of this period.¹ So far as at present ascertained, Steven More was a Totnes man. He may have worked elsewhere also, perhaps at Dartmouth, as suggested by the quatrefoil mark. Such a multiplication of working points appears to have been by no means an unusual practice in the South-West of England. I may add that upon the back of the bowl of my Totnes spoon are engraved the arms of the family of Ken or Kenn, of Clevedon, Somerset, *silver three crescents gules, a mullet for difference*. A distinguished member of this west-country family was Thomas Ken, Bishop of Bath and Wells, 1685-91.

No. 2. A parcel-gilt Apostle spoon (St. Peter) of about the year 1570. The mark in the bowl is a single-masted galley with fore-and-aft rigging. This is the town mark of Looe, in Cornwall, as represented upon the ancient seal of the corporation of that town. Upon the back of the stem are the marks I PARNEL. The family of Parnell has many representatives in Cornwall, and from local inquiry I learn that a branch of the family was settled at Looe. It may fairly be assumed that I. Parnell was a member of this branch. In my remarks regarding Barnstaple which follow later I shall have more to say concerning Parnell.

No. 3. A gilt Apostle spoon (St. Bartholomew) of about the year 1660. The mark in the bowl is a double-headed eagle. This I suggest is the mark of Falmouth, as it is represented in the arms of that town. Upon the back of the stem this mark is repeated, and upon either side of it is the maker's mark W C. I have not yet been able to discover the name of this silversmith.

No. 4. A parcel-gilt lion-topped spoon of about the year 1580. This is one of four or five spoons belonging to me which are similarly marked. The mark in the bowl is, within a dotted circle, the letters 'R' in monogram flanked by a floral sprig. Upon the

¹ I am aware that some writers on Old English plate and plateworkers illustrate, as excepted examples, some pieces made by the silversmiths Cotton and Mathew, but as a matter of fact neither of them worked at Exeter.

back of the stem is a mark representing St. Anthony's pig with a bell round his neck, and on either side of this mark is another representing a tau cross T. This cross, sometimes with the pig and bell, and sometimes with the bell only, is a well-known emblem of the saint, who is closely associated with Cornwall. Of towns and villages in that county there are two named St. Anthony, and one or more named Antony only. Both the St. Anthonies are near to Truro, one being about seven miles distant and the other about a dozen.

Anthony as a surname, also, is a not uncommon family patronymic in the county. Thus the pig, bell, and tau mark may be that of a silversmith named Anthony, or it may have a local reference to the adjacent township of St. Anthony.

The T monogram has been read by some as TRURU in full, which was another spelling of Truro. But be this as it may, the mark must with the greatest degree of probability be ascribed to Truro.

No. 5. An Apostle spoon (St. Matthias) of about the years 1560 to 1570. The mark in the bowl is a rayed sexfoil. On the back of the stem is the mark T. MATHEW, being T. Mathew in linked letters. Thomas Mathew, silversmith of Barnstaple, is mentioned in official records dated 1571. He must then have been of several years standing in the trade, inasmuch as Richard Diamond, another Barnstaple silversmith mentioned in the same record, had been his apprentice. Much church plate made by Thomas Mathew is still in existence, and within a radius of about five miles round Barnstaple are eleven parishes the church plate of which bears his mark as shown above. He is the same Thomas Mathew who, contemporaneously or otherwise, worked at Tregoney in Cornwall. At St. Gennys in Cornwall, which is half-way and on the direct route between Tregoney and Barnstaple, is a communion cup bearing Mathew's mark and the town mark of Tregoney, a pomegranate on a spray with two leaves slipped. Many other pieces by him, similarly marked, exist elsewhere, and as an example I produce a seal-top spoon of about 1560, with his mark and the Tregoney mark. I have already remarked that Mathew had no connexion with Exeter. Whether he severed his connexion with Tregoney or not, I am unable to say, but it is not unlikely that he did, for he seems to have settled down at Barnstaple and founded a business there. In the next reign we find a Robert Mathew of Barnstaple, silversmith, and it may reasonably be conjectured that he was the son and successor of Thomas. It is a remarkable fact that another Cornishman, Parnell of Looe, whom I have already mentioned, appears to have migrated to Barnstaple. Whether this migration of silversmiths was of any


considerable proportions in the trade, and what might be its cause, is a matter of speculation. Perhaps trade prospects in Devonshire were brighter than in Cornwall, and, while there was no opening for new-comers in the full ranks of silversmiths in Exeter, Barnstaple with its important shipping and woollen activities presented an attractive and promising centre. Certain it is that early in the reign of Elizabeth (if not earlier) a fairly considerable number of silversmiths, whose names are known, were there established. The Barnstaple seal-top spoon by Parnell, which I produce, is marked with a flying bird. On the back of the stem, in the curiously cramped and linked lettering affected by Mathew and other silversmiths of the south-west, is the mark of Parnell's name.

No. 6. Before quitting Devonshire, I exhibit a slip-ended spoon of about the year 1650. This spoon is marked in the bowl and thrice on the stem with a Roman capital X (the mark of Exeter) upon a punch shaped to the outline of that letter. Exeter marks thus shaped are found on pieces of the middle of the seventeenth century, of which, however, very few are extant. But a singular feature of the mark upon this spoon is that, whereas the X mark of Exeter was invariably surmounted by a crown (except upon one or two very early pieces ascribed to John Jones),¹ the X upon this spoon is plain and uncrowned. This fact suggests the interesting inquiry whether this departure from established practice is to be explained by the civic authorities for the year in office having thought fit to make an official demonstration of their republican sympathies by displacing the royal crown from the city assay mark. I have not yet been able to make any research into the records of the city or elsewhere after evidence to prove or disprove this hypothesis.

No. 7. I now come to a parcel-gilt seal-topped spoon, bearing in the bowl the mark of a pellet within a small ring of pellets, encircled by a larger ring of similar pellets, which writers upon old plate have attributed to one Richard Orange, who was a silversmith at Sherborne in the time of Elizabeth. I believe that the Rev. E. H. Bates-Harbin is responsible for the Richard Orange legend. Having found, at various places in Somerset and Dorset, church plate bearing this pellet mark (which he compared to a Guelder rose), and at a village not far from Sherborne a church cup bearing a mark of the letters R.O., he seems to have assumed that the Guelder rose must be the mark of Sherborne, and the R.O. mark that of Richard Orange, silversmith, who had been a churchwarden of Sherborne in the last half of Elizabeth's reign. It will be noted that there is nothing in existence to connect the Guelder rose mark with the R.O. mark, for they are not found together upon any

¹ His mark was I·IONS.





piece, nor is there anything to connect the R.O. mark with Sherborne at all, unless it be the fact that the cup marked with it happens to be in the vicinity. But subsequent writers have gone still further and have actually ascribed the pellet mark to Richard Orange. Of course, the R.O. mark may have been Orange's, and the pellet mark may have been the mark of Sherborne. It is certain that there were silversmiths working there early in Elizabeth's reign. To mention one or two: Robert Ashborne was among the earliest, and he was the master silversmith under whom Richard Orange served his apprenticeship. Another bore the curious name of William Troublefylde, which I take to be a corruption of Turberville, a name not unknown among Dorsetshire worthies. I exhibit a seal-top spoon of about 1580, which bears the pellet mark in the bowl, but such spoons are not of very great rarity.


No. 8. A flat-stemmed trifid spoon of the Charles II period. Upon the back of the stem, struck thrice, is the mark of a barbed and seeded rose, and the maker's mark . I think this may

be the mark of the town of Southampton, the arms of which are three roses, similar to those represented on this spoon. At South Stoneham, about a couple of miles from Southampton, is a seventeenth-century church cup marked with this identical rose mark repeated, which there is good reason to suppose is of local manufacture. With regard to the maker's mark, P.W., I may observe that the name of Wells connected with the manufacture of silver plate at Southampton is found recorded. In the reign of Elizabeth, one James Wells was a silversmith there, and it is possible that the P.W. of this spoon was a Wells of a later generation.

No. 9. A parcel-gilt seal-top spoon of about the year 1620. This spoon is impressed in the bowl with a mark which is identical with the arms of the town of Wokingham, an acorn slipped and leaved. These arms are, I believe, peculiar to Wokingham, and have not been used by or granted to any other town or to any person. Upon the back of the stem this mark is repeated thrice. This spoon is the only example with the acorn mark which has come to light up to the present time.


No. 10. A large flat-stemmed trifid gilt spoon of about the year 1670. Upon the back of the stem are four marks. The first is an Old English capital G in a plain shield; the second is the maker's mark in Roman capitals, F.H. conjoined; the third is the sexfoil of East Suffolk, which is found upon much church plate in that part; and the fourth, which is struck near the tip, is the first mark repeated. I think we may now with certainty accept the G mark as the town mark of Ipswich, in and around which town are many Elizabethan church cups marked

with a Roman capital G. An East Anglian antiquary, for whom I have great respect, has launched a theory, and has argued it with his usual ability, that this G was the mark of an Ipswich silversmith named Gilbert. I am unable to subscribe to his conclusions, and for the following reasons: (1) Three centuries prior to Gilbert's time the G mark (as an abbreviation of Gippeswic) was used as a mint-mark by the Ipswich Mint. (2) The family of Gilbert of Ipswich was a numerous one. From the later part of the reign of Henry VIII. down to the earlier part of that of Elizabeth, there were at least eight of them working as silversmiths. It is highly improbable that one of their number would appropriate as his mark the sole initial of the surname common to them all without the distinguishing initial of his Christian name. (3) Such a combination of initials is actually found upon church cups in three of the neighbouring parishes, viz. the monogram , which can scarcely be other than the mark of one of the eight, viz. Jeffreys Gilbert. (4) The G mark on the Elizabethan cups is occasionally found associated with the zigzag groove caused by the gouge of an assayer who took the sample of silver by the foreign method of gouging and not by the English method of scraping. This is very common in East Anglia, and many sixteenth-century church cups bearing the Norwich hall-mark show the assay by gouge. The foreign immigrants who flocked to Norwich, and to whom that city was largely indebted for the excellence of its early silver, would after naturalization be eligible to the office of assayer, and would use the mode to which they were accustomed. The zigzag groove is thus evidence of an official assay having been made, and if only one mark is found upon a grooved piece, it is clear that it is the official mark of the assayer. (5) Upon the spoon which I now produce, and upon three other examples of mine (a cup and two spoons), the  in Old English capitals is found in combination with the East Suffolk sexfoil and with a variety of marks which are clearly makers' marks and exclude the possibility of the  being the maker's mark. Therefore in these instances, which date about 1670, the  cannot possibly be a Gilbert mark. (6) The fact that we have found no evidence that the silversmiths of Ipswich were ever incorporated, and no trace of any ordinance regulating them or appointing a town mark, is of little importance. The same lack of evidence and data confronts us in the cases of many provincial towns, the town marks of which have been ascertained and verified beyond all question. Notable examples are Exeter (prior to the eighteenth century) and Hull.

For the above reasons I am satisfied that the G (or ) is the town mark of Ipswich, and probably had its origin in the early mint-mark.

No. 11. A fifteenth-century diamond-pointed spoon. This spoon offers many points of interest for consideration. In the first place, the mark is not struck in the bowl but upon the back of it, a feature which is never found after the middle of the fifteenth century and therefore always indicates high antiquity. In some inventories of the royal jewels and treasure taken in the fourteenth century, no fewer than seventy-seven spoons thus marked are enumerated. In the second place, the assay has been taken by the foreign method of the gouge, which almost certainly points to an East Anglian place of origin, having regard to the quantities of Norwich and other East Anglian Elizabethan church plate which we find have been thus gouged in the assaying. In the third place, the mark is apparently the Ragged Staff, the well-known cognizance of the Beauchamp Nevill family, of whom Warwick the King-maker, who died in 1471, was a member. This family held large possessions in the fifteenth century in Essex, around the ancient but now decayed town of Coggeshall. That plate was made and marked at Coggeshall in the fifteenth century is an ascertained fact. The minutes of the Goldsmiths' Company record a visit of the wardens to that town in 1468, and an examination made there of twelve spoons which had been improperly 'marked with a touch like the Liberd Heed'. Among the names of local silversmiths mentioned in connexion with this matter one at least is Dutch, as might be expected, having regard to the vast number of Dutch immigrants into East Anglia generally, and particularly into Coggeshall, where they introduced novel crafts. The Dutch silversmiths no doubt also introduced their own fashion of assaying silver by the gouge. We thus complete a cycle of data which affords reasonable ground for conjecturing that this spoon may be of Coggeshall make, and date about the year 1450.

No. 12. A Puritan spoon of about 1650. It is marked thrice (once in the bowl and twice on the stem) with a lion's head which has the bushy mane and large wide-open ears that form the distinguishing features of the three lions' heads, or, heraldically speaking, leopards' heads, represented on the arms of Shrewsbury.

The maker's mark upon the stem is , but I have not yet been able to identify him. Shrewsbury had no doubt a considerable industry in plate manufacture, and many silversmiths are known to have been located there. But their work would seem to have almost entirely disappeared, and, in fact, this spoon is the only example which I can bring myself to accept as fairly attributable to Shrewsbury."

Mr. C. J. JACKSON had read a paper on the spoon and its

history twenty years ago,¹ and had then, with Mr. Hope's assistance, searched all the inventories known in order to arrive at a classification of all the types. The earliest mediaeval spoon was that with the fig-shaped bowl, and one was known of the fourteenth century with the leopard's head struck upside down at the top of the bowl. This was the London mark, established in 1300, and the specimen so stamped differed from those of the fifteenth and sixteenth centuries. Another spoon, the only one of the kind he had seen in silver, had a maiden's head with horn-shaped head-dress padded with the *bourrelet*: it had a fifteenth-century bowl, and belonged to the first quarter of that century. He showed another with a diamond point and the London leopard's head and a ring of pellets of the early fifteenth century, a specimen, slipped in the stalk, of 1514, and an Apostle spoon of 1515.

Mr. HOPE could not accept some of the attributions suggested; local seals afforded some ground for identification, but in many cases were of no assistance. There was, for instance, a second Totnes seal that differed from the one utilized to identify the mark, and the same device occurred on the seal of Exeter. The galley was claimed for Looe, but the same device was found on seals of Rye, Tenterden, Newport (I.W.), and Yarmouth. The rose was unjustifiably claimed for Southampton, as Carlisle had a cross between four roses. The ragged staff assigned to Coggeshall might equally well be the herring standing on its tail that occurs on the controller's seal of the port of Yarmouth. The leopard's head was common to Stratford and Shrewsbury.

Mr. CARLYON BRITTON referred to the G supposed to be the mint-mark of Ipswich. The coinage ceased there in the time of Henry III., and down to that date there were no mint-marks in existence.

Mr. ELLIS replied that fig-shaped spoons dated from the fifteenth century and were not earlier. The castle was one of the commonest devices for corporation seals, but it was assigned to Totnes in this case because although there was an enormous quantity of Exeter Elizabethan plate none was marked with a castle. It was not till the end of the seventeenth century that the castle appeared on Exeter plate for the first time, and that was a single castle, the triple-towered only appearing after 1700, when the Exeter assay office was re-established. The galley was assigned to Looe because the silversmiths named Parnell lived there; and the southern silversmiths marked their plate with their names in full, which was

¹ *Archaeologia*, liii. 107.

not the case elsewhere. On Carlisle plate of the sixteenth century the rose was invariably four-leaved. The spoon ascribed to Coggeshall was certainly East Anglian of the fifteenth century, but might belong (as Mr. Hope suggested) to Yarmouth. He had found silversmiths working in all the places to which he had assigned assay marks.

The PRESIDENT thought there was little reason for assigning the castle to Exeter or the rose to Carlisle. In all the towns where silver plate was marked there was an officer of the municipality to stamp the silver in his assay office, and the question arose whether all the towns named had assay officers, or the marks were chosen at the fancy of the silversmith. Caution was needed in assigning the assay marks to towns, as mistakes might easily become crystallized.

C. J. JACKSON, Esq., F.S.A., by permission of the vicar and churchwardens, exhibited a silver-gilt covered cup which has for



Fig. 1. COVERED BOWL AT STUDLEY CHURCH, NEAR RIPON.
DATE ABOUT 1380-1400. SCALE $\frac{1}{2}$ LINEAR.

a long period been used as an alms-basin in the church of Studley Royal, near Ripon.

It is a bowl with a cover and a separately wrought plinth on which the bowl rests, all of silver beautifully worked and parcel-gilt. The bowl, in form, resembles an inverted truncated cone, like the bowl of a mediaeval chalice. It has a plain narrow band round the base, and chased around the middle of the bowl is a continuous stem with ascending and descending branches of conventional

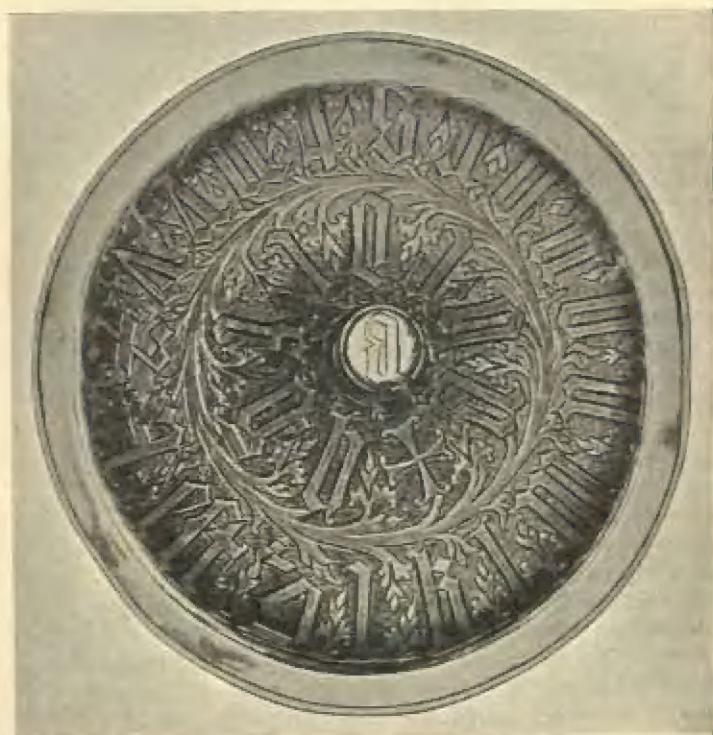


Fig. 2. COVER OF BOWL AT STUDLEY CHURCH, NEAR RIPON.
DATE ABOUT 1380-1400. SCALE $\frac{1}{2}$ LINEAR.

foliage. There is another plain band at the lip from which bifurcated branches of foliage descend and meet the ascending branches of the central stem. Arranged between the branches on the upper half of the bowl are fifteen letters of the alphabet from *a* to *p*, of the broad-limbed Old English or black-letter type found in illuminated manuscripts of the fourteenth century. The rest of the

alphabet is continued between the lower branches, followed by



On the knop of the cover the letter *a* is engraved, and a stem with branches similar to that on the bowl encircles the cover itself midway between the knop and the rim. A cross and the first eight letters of the alphabet *a* to *h* inclusive are engraved between the branches in the upper circle; the remainder of the alphabet, followed by five characters like those on the bowl, is contained in the lower circle. Where the cover rises from its rim it is encircled by a broad band from which foliated branches spring, and, meeting the short branches of the middle stem, fill the spaces between the letters. The modern *j*, *u* and *w* are absent from both bowl and cover. The meaning of the characters which follow *j* has been regarded as extremely puzzling, and no satisfactory explanation of them has hitherto been suggested.

Attached to the rim of the lid, which projects well over the lip of the bowl, is a vertical border or edging, a full quarter of an inch deep, with a bold cavetto enriched with small quatrefoils between two small ovolo mouldings.

There is no moulding round the base of the bowl; it fits into the plinth like a spigot into its socket. The plinth itself is boldly moulded; the lowest member is a small torus; above that is a cavetto enriched with quatrefoils like those on the edging of the cover, with a cable above set between two astragals, and a series of openwork rings running round about half-way up, surmounted by a base-moulding composed of an astragal over a cant, with a slightly rounded edge, a form frequently found in fourteenth-century architecture.

The height of the plinth is $1\frac{1}{2}$ inch, of bowl $2\frac{1}{2}$ inches, and of cover $2\frac{1}{2}$ inches, but $\frac{3}{8}$ of an inch has to be deducted for the socketing of the bowl into the plinth and the overhanging drop of the edging of the cover, so that the total height of the plinth, bowl, and cover when set up as shown in fig. 1 is $5\frac{1}{2}$ inches. The diameter of the plinth is $2\frac{1}{4}$ inches; of the bowl $5\frac{1}{2}$ inches, and of the cover $5\frac{3}{4}$ inches.

Each part is of massive construction and very skilfully wrought. The endless stem with foliated branches, which doubtless represents the tree of knowledge, and the letters which it contains are excellently engraved, both on bowl and cover, and the background is neatly and finely hatched.

The bowl is undoubtedly English work, and is perhaps the most extraordinary example of English plate which has ever been brought to light. How or when it became the property of the church at Studley Royal is not at present known. It obviously was

not made for ecclesiastical purposes, and its use as an alms-basin was, it is equally obvious, not originally contemplated. Mr. T. M. Fallow has found a reference to a similar object in the will of John Morton, esquire, of York, who in 1431 bequeathed to Robert Gaytenby, his cousin, "unum collok pece argenti cum scriptura A.B.C. in cooperculo".¹ It seems clear that the vessel was intended to be used for the double purpose of a porridge-bowl and, like the horn-book of a later date, a primer.

The date of this interesting and beautiful example of English plate cannot well be later than the end of the fourteenth century; it is probably of a date between 1380 and 1400.

The PRESIDENT considered that the final character of the inscription was certainly the ampersand. The royal gold cup in the British Museum had a cover and bowl of practically the same shape as the cup exhibited, and was of about the same period.

The Rev. J. F. HOYLE, M.A., through the President, exhibited



LATTEN FOOT OF A PORTABLE CROSS, AT STOKE POGES, BUCKS.

Test. Ebor. ii. 15.

the latten foot, with traces of gilding, of a portable cross, belonging to the parish church of Stoke Poges, Bucks.

The object in question has a sexfoil base, $9\frac{1}{4}$ inches in diameter, with a vertical edge, $\frac{3}{4}$ inch deep, wrought with simple mouldings, from which rises a swelling dome-like foot contracting at the top with an ogee curve into a short stem. Round this is a moulded band with battled lower edge (reversed), which supports a circular platform or gallery, 3 inches in diameter, with a border or cresting of conjoined trefoils. From within this, carrying up the lines of the foot, rises a hollow tapering shaft or socket, $4\frac{1}{2}$ inches high, on which to set the cross. The upper surfaces of the pro-



INSCRIPTION AND FLORAL DEVICES ON THE BASE OF THE STOKE POGES
CROSS-FOOT. $\frac{1}{2}$.

jections of the base are engraved with pairs of leaves. Round the dome of the foot, about $\frac{3}{4}$ inch from the base, is a band engraved with the inscription:

Ihs nazarenus rex iudeorum fili dei miserere mei

Above the band are two sprays, each of three flowers, apparently corn-flowers, alternating with as many large conventional plants of different pattern, with tall tapering spikes rising from the middle.

Only very slight traces of the gilding remain.

The date of the object is about 1480. It is of undoubted English work, and probably a unique survivor of a class which inventories show to have been comparatively common, a foot upon which the cross could be set upon the altar after its removal from the staff upon which it had been carried in procession.

Mr. HOPE would prefer the sixteenth century as the date of the work, but there were grounds for putting it before 1500. The stalls at Windsor were carved a few years before and after 1478, and about them occurred repeatedly a floral device like that on the foot exhibited, the peculiar spikiness of which agreed well with the Windsor specimens.

FRANCIS W. READER, Esq., exhibited a series of bone objects found in London, York, Colchester, and elsewhere, upon which he read the following notes:

"I am pleased to have the opportunity of bringing these objects before the notice of this Society because they appear to have escaped any particular attention, and, so far as I am aware, they have not been recognized as a distinct class of implement. Owing to the kindness of the various owners and custodians of these specimens, I am enabled to place before you nearly the whole series with which I am acquainted. Five of these are from the York Museum, three from the Guildhall Museum, London, one each from the museums of Colchester and West Ham, and two from the collection of Dr. Frank Corner.

With one exception the bone employed is the metacarpal or metatarsal bone of the horse or ox, and the distinguishing feature is one or more scooped cuts which are made longitudinally in the shaft of the bone and are carried sufficiently deep to expose the hollow of the medullary canal. This cut appears, in most cases, at or near the middle of the front of the bone, but sometimes a similar cut occurs at the back, while in other instances two or more of these cuts are placed end to end along the front of the bone.

The backs of all of them have been trimmed flat, and in some cases the ends with the projecting processes are cut away so as to make the under side fairly level.

These characters, the scooped cut and the flattened back, are constant, and may be regarded therefore as the factors which determine objects of this class.

Circular holes bored transversely through the bone near the ends form another feature which, although prominent in some specimens, is quite absent in others, and appears therefore to be of subsidiary and not of functional importance.

As the occurrence of these transverse holes forms the local

peculiarity of an otherwise similar object having a wide geographical distribution, it may be well briefly to describe the specimens according to their localities.

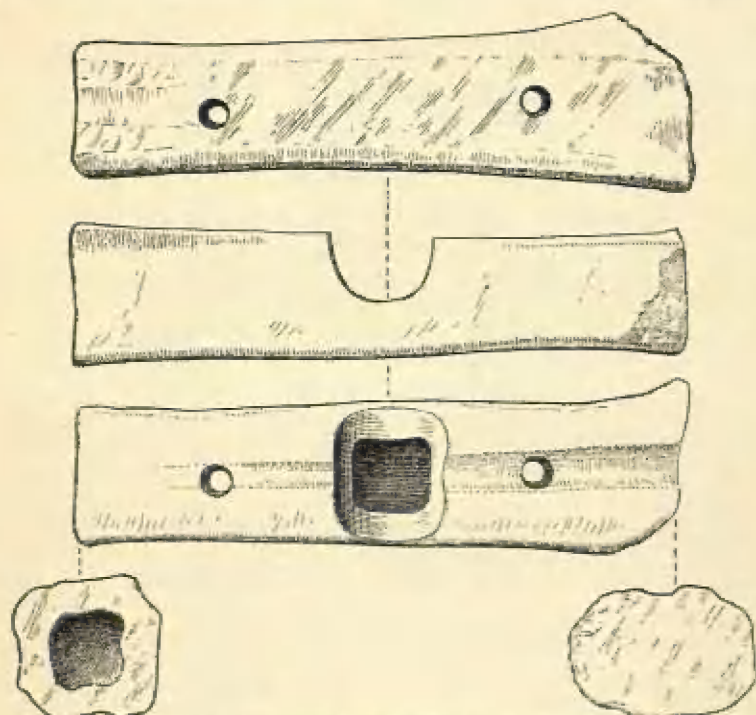


Fig. 1. BONE OBJECT FOUND AT COLCHESTER.

In this way those from Essex may be first considered, because they alone are pierced at both ends. That from Colchester (fig. 1)

is the most highly finished object of the series, having the epiphysis at both ends sawn off, while the scooped cut is of a peculiarly deep and narrow character and very neatly formed.

The West Ham specimen (fig. 2) was found at Braintree, and in this the scooped cut is not so centrally placed on the bone, and is shallower and less regularly made than in the Colchester example. The ends of the bone remain, but the projecting portions have been cut away at the back.



Fig. 2. BONE OBJECT FOUND AT BRAINTREE, ESSEX.

Of the York specimens (fig. 3) two only are perfect, and both of these have been pierced at one end only, while in other respects they resemble very closely the one from Braintree.

The two fragments show other peculiarities. One has a scooped cut very near the remaining end, while it has been broken across another such cut; the other has been cut at the back as well as in front.

The Guildhall objects were found in London; the most perfect (B, fig. 4) has a shallow scooped cut about the middle of the front of the bone. The extreme ends of the bone have decayed, but sufficient remains to make it tolerably certain that this object had not been pierced. It is the same with the two imperfect specimens. One of these (A) is exceptional, being formed from a radius of horse or ox which has been considerably cut and trimmed at the end. It has one very definite scooped cut and the remains of another at the point where it has been broken.

The second portion (C) is a half of a similar object to B, and is not pierced.

The Mortlake examples (fig. 5, A and B) are portions only, but one has an exceptional variation, being pierced with two holes at

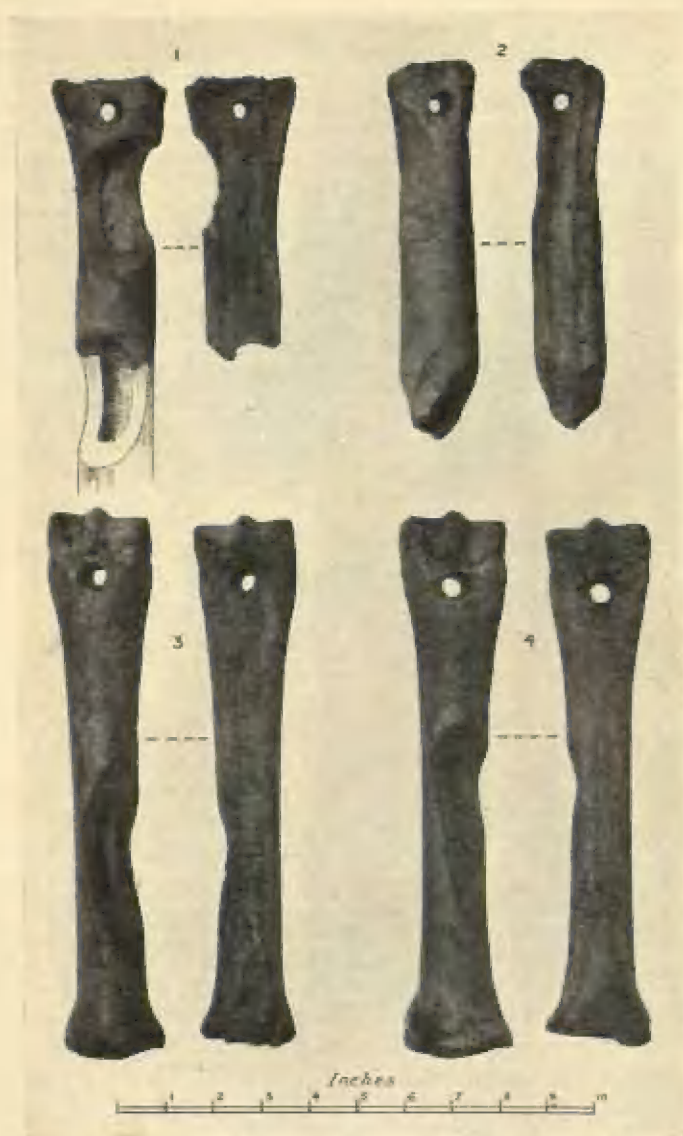


Fig. 3. BONE OBJECTS FOUND AT HEWORTH, YORKS, 1879.

one end. The other specimen has not been pierced. In both these instances scooped cuts have been made back and front at about the same point, and it is across the part thus weakened that the objects have been broken.

The period to which these objects belong is very uncertain, and most of them have no particulars recorded as to the circumstances under which they were discovered. In all cases there is no doubt



Fig. 4. BONE OBJECTS IN THE GUILDHALL MUSEUM.

that iron tools have been employed in cutting and drilling them. The Braintree example is described by the Rev. J. W. Kenworthy, who presented it to the Essex Field Club Museum, as having been found with Roman pottery, and the York specimen found at Clifford Street is said to have been discovered with a number of Danish objects. There is, however, no satisfactory evidence that in either of these cases the objects were in direct association. The other four York specimens were found together at Heworth, but

without other relics. Two of those in the Guildhall (fig. 4) are recorded as coming from 'London Wall' and at a site which formed part of the bed of the Walbrook, while the third came from Wood Street. From both these sites Roman and later objects have been plentiful, and it would be impossible to assign them to any definite period without more precise particulars.

Equally vague are the conditions relating to the Mortlake objects, which appear to have come from the Thames alluvium, and may represent any period from the Early Iron Age downwards.

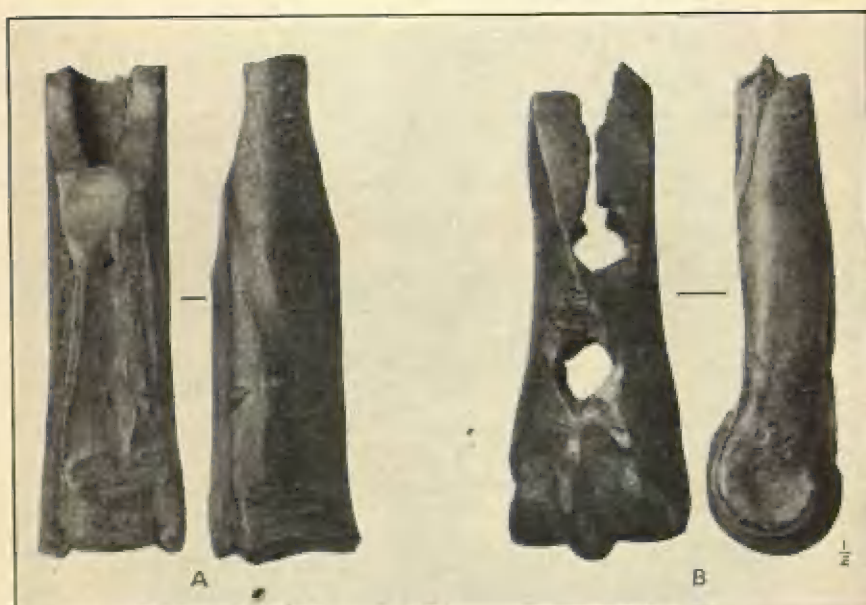


Fig. 5. BONE OBJECTS FROM MORTLAKE

The use which these objects were intended to serve is a matter equally obscure, there being no marks of wear on any part of the bones. The scooped cuts are still sharp and unabraded, the various facets formed by the knife or other implement by which they were produced being quite distinct. The holes also, in those cases where they occur, are quite sharp and unworn.

Various uses have been suggested for these objects, but in most cases the conclusions seem to have been arrived at from the consideration of isolated specimens and the chance resemblance of certain characters to those of objects of definite and widely different purposes.

Thus the scooped cut appears to have been mistaken for a mouthpiece, as being in general form like those of the Bronze Age

and African trumpets, and the drilled holes to have been confused with the stops of a flute or whistle. The fact that some of them are pierced at both ends, like one form of bone skate or sledge-runner, has led others to place them in that class.

A comparison of the whole series readily disposes of these conclusions. The size and shape of the scooped cut on the Colchester specimen will be seen to be quite unsuited for a mouthpiece, while the occurrence of more than one of these cuts on several of the other specimens is enough to show that they were not intended to serve this purpose. The drilled holes, too, while not an essential part of the implement, in some cases pass through the solid portion of the bone, and all of them are carried right through the bone. Had they been intended for the production of notes on a musical instru-



Fig. 6. BONE SKATE FROM RAMSEY, HUNTS.

ment they would only be cut in one wall of the bone in order to communicate with the hollow of the interior.

None of them is polished in the manner of the skates, and the piercings are on the flat of the bone, while those of the skates are on the upturned ends, or were at least until the curve of the bone was worn down by much use. A comparison with the specimen from Ramsey, Hunts. (fig. 6), which has been kindly lent me for exhibition by Mr. Bodger, will at once show this difference, as will also that from Stixwold Ferry figured by Dr. Munro.¹

It is, however, far easier to say what these objects were not than to assign any definite use to them. It appears certain that their purpose was a special one for which this particular form was most suitable, or its use would hardly be found to extend over so wide an area. As a tentative suggestion, it seems to me probable

¹ *Prehistoric Problems*, 300.

that the scooped cut may have served as a rest to hold some material while it was being manipulated. The holes, where they occur, may also have been for securing the object to the bench by means of pegs or dowels.

An object which affords some comparison is a grooved block of bone in the York Museum, with which were found several bone pins, and it is supposed that the pins were held in the groove of this object while being sharpened to a point. This also may form a link with the bone object so commonly found in London, and associated with mediaeval relics, known as a 'pin-polisher'. In this are several small grooves in which the ends of lengths of wire were placed and filed to a point. The marks of the file show plainly on the surface of these implements, but it is conceivable that with some larger article the marks of its manufacture need not necessarily be left on the rest in which it was held.

For the present it is perhaps more important to draw attention to these objects as being something out of the common, without attempting too much in explanation of them. Further examples may be found, and an extended series may throw fresh light on the subject."

Lt.-Col. LYONS, F.S.A., exhibited two moulded bricks of the sixteenth century, with pictorial subjects, purchased by him in Ipswich.



MOULDED BRICK WITH THE STORY OF ST. DOROTHY. $\frac{1}{2}$.

No. 1 has a group of seven figures, and probably represents a

scene from the story of St. Dorothy: in the middle stands (St. Dorothy?) a woman with bound hands in custody of two Roman soldiers, in front the judge listens to one of her accusers, while another figure and a child holding a basket of flowers and fruit are seen to the right. Length $5\frac{5}{8}$, height $4\frac{3}{4}$, depth $2\frac{1}{2}$ inches.

No. 2 is divided into lozenge-shaped compartments by a raised fillet, the two completed lozenges having heads of Roman emperors within circles of foliage, the sections of other compartments showing parts of radiating bosses within circular bands of eeg-and-tongue ornament.



MOULDED BRICK FROM IPSWICH. $\frac{1}{2}$.

Other examples of moulded bricks are in the British Museum (Franks collection) and in the Victoria and Albert Museum. A similar brick with the legend of St. Hubert or St. Eustace is in possession of the Society. It was found in 1810 in the walls of the Queen's Arms, Bird in Hand Court, and presented in 1812 by Mr. John C. Lettson, M.D., F.S.A. The two bricks exhibited by Lt.-Col. Lyons were bought in Ipswich, but it is not known where they came from. It is generally accepted that these moulded bricks were made in the Low Countries, but there is no reason why they should not have been made in this country by one of the numerous Huguenot refugees.

Thanks were ordered to be returned for these communications and exhibitions.

THURSDAY, 10th FEBRUARY, 1910.

CHARLES H. READ, Esq., LL.D., President, in the Chair.

Col. Francis Randle Twemlow, D.S.O., B.A., was admitted Fellow.

The Very Rev. the DEAN OF WESTMINSTER, D.D., F.S.A., read a paper on the form and extent of St. Edward's Church at Westminster. He began by calling attention to the resemblances both in size and position between the fragmentary bases of the presbytery at Jumièges, built by Abbot Robert between 1040 and 1052, and similar bases which still exist under the presbytery at Westminster. He showed an approximate plan of the presbytery at Jumièges which differed from that just published by M. Roger Martin du Gard in his archaeological study of the ruins of that abbey, in that the curve of the apse was drawn from a centre not on the line between the centres of the columns, but two feet further east. He had become sceptical as to the generally received opinion that there was an ambulatory round the Norman apse at Westminster, and was glad to find that Mr. Lethaby had, on grounds of his own, recently recalled his former judgement in this matter. The Dean showed a conjectural plan of the Confessor's church, closely resembling the plans of Cerisy-la-Forêt, St. Nicholas at Caen, and other Norman churches which he had lately visited. He argued against the view which has prevailed for the past fifty years, that St. Edward left his church unfinished and lacking the nave. He demonstrated that the early documentary evidence was entirely in favour of its completion before its consecration on Holy Innocents' Day, 1065. He also discussed somewhat minutely the attributions of several of the altars, and the position of the tombs of St. Edward, Queen Edith, and Queen Maud. The Dean acknowledged his indebtedness to Mr. Lethaby and to Mr. Francis Bond for friendly suggestion and criticism, and offered his conclusions for the consideration of those who had a much larger knowledge and experience than he could claim.

Mr. W. R. LETHABY, F.S.A., submitted the following remarks on the Dean of Westminster's paper:

"The Dean of Westminster's analysis of the early descriptions of the Confessor's church, which he has been so kind as to allow me to read in manuscript, seems to prove that it was completed to the west end. Only if a strong presumption could be set up for

what has been the recent view would it be worth while to see whether the texts could be made to harmonize with a theory which they seem to negative conclusively.

I feel that there are some such reasons, but it may well be that they are insufficient, and I am not qualified to deal with the texts. If, according to the reading now proposed, the old Saxon church lay beyond the west porches of the Confessor's church, it would follow that soon after the completion of that church the site of the old Saxon building was abandoned and that its altar (which according to the legend of the time had been dedicated by St. Peter himself) was desecrated. In that case the old church must have been near the west boundary of the precinct; the palace, however, was squeezed into a small belt along the marshy shore of the river, and between it and the church the best middle ground was unoccupied. Many years ago a lump of red concreted mortar about 4 inches thick, with a level surface, which may have been part of an old floor, was found, I believe under the present nave.¹ The Roman sarcophagus, with its Saxon lid, now in the entry to the chapter-house, was discovered outside the quire.

If the Confessor's church was completed at once, then the frater, dorter, and cloister must have been delayed in favour of the nave, which perhaps is irregular; and if the completed church was homogeneous, why did Henry III. only undertake the rebuilding of the eastern limb? It may be noted that the Bayeux tapestry, which shows many facts regarding the church correctly, does not show the west towers which the finished church had. If we might suppose that the nave was extended in the twelfth century, the destruction then of the Saxon church might have been the cause of the building of St. Margaret's.

According to the early Life of the Confessor his church was separated from the old one by a *vestibulum*, and Sulcard says that the Confessor built as far as the *vestibulum*. Is it at all possible that this can be read as a limitation rather than otherwise, and that the vestibule between the Confessor's church and the old church came to be represented by the space at the back of the nave altar in front of the quire gates? Henry III.'s work only embraced the quire; it was begun in 1245; in 1258 he issued a mandate to take down more of the Confessor's church 'as far as the *vestiarium* which is by the king's seat so that it may be rebuilt'. Now vestry and vestibule seem to have been interchangeable, so that Flete even calls the existing revestry the *vestibulum*. If such a reading of the case were possible it would appear likely that the old Saxon altars became the nave altars of the Confessor's church. It would

¹ Mr. W. H. St. John Hope tells me it might be Roman, but that some paving of like sort was found at the Chapel of St. Pancras, Canterbury.

thus be possible for the Trinity altar where the Confessor saw the vision to have persisted in the Norman nave.

As to the form of the Confessor's church, the Dean has shown how close is the correspondence between some of the dimensions at Jumièges and at Westminster. From the plan lately published¹ I take some others. The interior width of the quire was 31 feet both at Jumièges and at Westminster. The main span was about 41 feet from out to out, which would suit the remains at Westminster and is almost identical with the dormitory range, which would have run on from the transept. The total width of the interior at Jumièges was about 62 feet.² The total widths of the naves at St. George's de Boscherville and at Lincoln were also 62 feet. St. Étienne at Caen was probably a new departure in bigness. That Westminster was narrower than at present is indicated by the facts that when Henry III. rebuilt the presbytery the coffin of the Abbot Edwin who, Flete says, was buried in the cloister, was with others removed,³ and later, when the present nave was erected, a chapel which had been erected against the north side of the older church by Abbot Crokesley had to be destroyed.

The transepts at Jumièges projected about 25 feet, and there is some direct evidence that those at Westminster were much less pronounced than those shown on Mr. Micklethwaite's plan, for he stopped the dormitory too far to the south, not allowing for the fact that it runs on over the entry to the present chapter-house.

Digging may yet reveal much: I had hoped to find the terminations of the aisles right and left of the great apse, but a trial pit made last summer discovered only a solid layer of concreted rubble under the pavement, in which it was hopeless to search.

¹ *Bulletin Monumental*, July, 1900.

² Dawson Turner gives this dimension; also 31 feet for the width of the quire.

³ I am assuming that like the other abbots' graves it was placed against a wall running east and west, in this case the south wall of the church. The Dean gives me the following note: "Abbot Edwin was buried in the cloister in a place worthy of so great a father". When the monastery was rebuilt (*reedificato coenobio* [not *ecclesia*]) he was placed in a coffin (which contained three other corpses) in the new chapter-house, by the entrance, on the south side. It is possible that he was buried at first by the wall of the nave aisle, or rather well out in the cloister walk, as the other abbots were in the south cloister. Their effigies were moved under the seat in the eighteenth century.

But it is equally possible that he was buried close to the chapter-house, as Abbot Bircheton was in 1349 (by the entrance of the locutory, next the dormitory door, in the cloister). As he almost certainly had no effigy, but only a flat stone over him, there would be no difficulty as to the orientation of his grave.

The rebuilding of the chapter-house and the adjoining part of the cloister would sufficiently tally with the words *reedificato coenobio* in Flete."

On the other hand, I have been able to put together several fragments of the Norman cloister arcade. The east and west sides of the cloister did not run square with Henry III.'s work, and Mr. Wallace tells me that in measuring the fragments of the Confessor's work he found that its direction was slightly out of line with the present axis.

Jumièges' apse was only excavated in 1905, but a still earlier example of the type of plan was known at Bernay, and we now have the interesting series of early Norman plans: Bernay c. 1020, Jumièges c. 1040, Westminster c. 1050. Among the remarkable features at Jumièges it may be pointed out that the interweaving of the nave arcade with the great flanking arches of the tower gives a point of departure for the alternate column and pier treatment in compound bays which had such marked influence in mediæval building tradition.

These points must stand as representing difficulties I have felt in the new interpretation of the documents; but since raising them I have found passages in Willis's *Architectural History of Winchester Cathedral* which go far to convince me that such objections are untenable. Wolstan, describing the old church dedicated in 980, tells how the visitor after admiring the atrium with its chapels and many doors, and the fine roofs, was conducted to 'the portals of the furthest vestibule' (*ducat ad extremi limina vestibuli*). Furthermore Willis shows that the Norman church, begun in 1079, was built on a site different from that of the Saxon church, which was destroyed after the dedication of the Norman church. 'It is worth observing,' he says, 'in comparing Winchester and Ely, the contemporary works of the brothers Walkelin and Simeon, that they were both erected on different sites from their previous Saxon churches.'

Mr. F. BOND said there was a conflict between clear documentary evidence on the one side and obscure architectural indications on the other. The words in the Latin text quoted, from *Principalis* to *circumvolvitur*, referred to the sanctuary, that is, the apse and presbytery; and this was "encircled by very high vaults". But vaulting at the clerestory level, as suggested in the paper, was impossible in 1050; and the best and most recent investigators gave 1090 as the date for the first high vaults, or even early twelfth century. The words meant that the sanctuary had an ambulatory all round, encircled by high vaults, and as low vaults on the ground floor of the transepts were mentioned further on, it was clear that the writer was searching for a term to express vaulting in the triforium chamber. Gloucester was a parallel case, with its low-groined vaults on the ground floor, and a demi-

berceau high up in the triforium chamber. In the next paragraph, he considered *ambitus* meant something semicircular, that is, the semicircular apse; and *hinc et inde clauditur* would then mean "enclosed by a double row of superposed arches", as at Gloucester, opening respectively into the ambulatory and the triforium chamber. At the same time, some explanation was needed of the strange piece of wall (model exhibited), and the curious shape of the pier which looked like a respond. It was possible to accept the walls and retain the ambulatory, in which case St. Edward's Church would resemble Gloucester, except that the presbytery had a wall separating it from the aisle. Among known plans of Norman churches in England, only about eight were found to correspond to the type exhibited, whereas there were some twenty of the Gloucester type. Periapsidal churches were common in this country, and could hardly have been derived from Normandy. There must have been some great classical example here to induce English builders to abandon the normal Normandy plan; and in his opinion that classical example was St. Edward's sanctuary at Westminster.

Mr. JOHN BILSON held that the architectural evidence of the existing remains, as illustrated by the models, was decidedly in favour of the theory advanced by the Dean and Mr. Lethaby that the Confessor's church followed the plan of Jumièges, as opposed to the theory of an ambulatory plan advocated by the late Mr. Mickelthwaite. It must be remembered that the architectural inspiration of Westminster was Norman, not English, and it was more reasonable to argue from the analogy of earlier Norman churches like Bernay and Jumièges, with presbyteries of two bays in length, rather than attempt to read into Westminster the expansion of the presbytery plan into three or four bays, a development which, so far as we know, only followed the Conquest. Even if the three-bay plan could be accepted as probable, the contraction of width indicated by the plan of the easternmost pier, in a presbytery which was carried out in a single building campaign, could not possibly be reconciled with an ambulatory plan of any known type. The Normans were logical builders, and the only logical interpretation of the plan of this easternmost pier was that it represented the pier at the springing of an unaisled apse of the type of Jumièges.

Mr. HOPE said there was a picture of St. Edward's church on the Bayeux tapestry, half in section and half in elevation. Whether fanciful or not, it certainly had features that corresponded closely enough to what was known of the Westminster building, and apparently represented a church with an aisleless

presbytery ending in an apse, and not one of the ambulatory plan. The nave arcade, the staircases at the tower angles, and the apsidal chapels of the transepts could all be distinguished.

The TREASURER pointed out that the representation of Bosham Church on the same tapestry was merely conventional, and quite unlike the structure; and he was inclined to think the same of Westminster.

Mr. P. M. JOHNSTON referred to the chapel of St. John in the Tower of London, which seemed to have been in Mr. Micklethwaite's mind when he reconstructed the plan of St. Edward's church. We had there a double tier of arches, and an apse with its ambulatory and row of columns; and that building was one of the earliest erected under the auspices of the Conqueror, its date being 1081. Two churches so near in time and in space would probably have points of similarity. He had made a drawing of a window at Westminster, since destroyed or covered up, that had tau-cross capitals as shown on the capitals at the Tower, and considered these the only examples in England. One of these little capitals, not from the actual window but some other part of Westminster, was to be seen in the museum now in process of rearrangement in the Abbey buildings. The axe-work was quite unlike that on Norman work.

The SECRETARY remarked that St. John's Chapel at the Tower was built by Gundulf in 1087. The Dean's interpretation of the words *altissimis erecta fornicibus* was justified. There was no reason why a church of that date should not have vaulting over the main span, and the Latin description certainly implied the existence of a vault over the presbytery. In the presbytery at St. Albans (1077) the main span was divided into four bays, while the aisles were of five bays. If a system of vaulting was not intended, why was it necessary to make wider bays in the main span than in the aisles? The *liber minutorum* at St. Albans was in the corresponding place to that at Westminster, i. e. the south transept, and the Dean's location of it at Westminster was therefore confirmed.

The DEAN OF WESTMINSTER replied that his critics had answered one another. The words *altissimis erecta fornicibus* had been read together and *circumvolvitur* taken alone. *Ambitus* did not signify roundness in any sense, nor ambulatory, but there was something to be said for Mr. Bond's suggestion for translating the passage. Two staircases seemed to be necessary, one for ascent and the other for descent, as at the present day. He did not press

for the western towers, but thought that *ad ipsum vestibulum* must mean the end of the building and implied its completion, at least on the ground level.

Thanks were ordered to be returned to the Dean of Westminster for his paper, which will be printed in *Archæologia*.

THURSDAY, 17th FEBRUARY, 1910.

CHARLES H. READ, Esq., LL.D., President, in the Chair.

The following gifts were announced, and thanks for the same ordered to be returned to the donors :

From the Author :—Gleanings in the field of ancient art. By J. D. Craze. 12mo. London, 1907.

From the Syndics of the Cambridge University Press :—Cambridge County Geographies, Cambridgeshire, by T. McKenny Hughes, F.R.S., and Mary Caroline Hughes. 1909.

From the Author :—Megaliths on the South Downs. By Edward A. Martin, F.G.S. 8vo. London, 1910.

From Harold St. George Gray, Esq. :

1. The age of stone circles. Report of the British Association Committee presented at Winnipeg, 1909.

2. Second interim report on the excavations at Maumbury Rings, Dorchester, 1909. 8vo. Dorchester, 1909.

From Lord Avebury, P.C., F.S.A. :—The memorial slabs of Clonmacnois, King's County. By R.A.S. Macalister, F.S.A. 8vo. Dublin, 1909.

Herbert Millingchamp Vaughan, Esq., was admitted Fellow.

Francis W. Reader, Esq., submitted the following Report of the Red Hills Exploration Committee :

INTRODUCTORY NOTE BY HORACE WILMER, Esq., C.E.,
HON. SECRETARY OF THE COMMITTEE.

"The first report of the Committee dealing with the work carried on during the years 1906-7 described the opening during the year 1907 of a large Red Hill in the parish of Goldhanger, situated on the shores of the Blackwater River, as well as a trial digging that took place in the Coastguard marsh near Goldhanger Creek. . . . The latter Red Hill appeared to possess features of unusual interest owing to the discovery of certain flues, and during the year 1908, as described in the following pages, a careful examination was made of the site.

It was considered advisable, as regards the year 1909, to examine

other sites well removed from those which had already been examined and which lay in the district between the rivers Blackwater and Colne.

After a preliminary search on the north and south banks of the River Crouch, the site of several small Red Hills lying in the same marsh on the south bank of the Crouch and in the parish of Canewdon was selected.

The neighbourhood is familiar to archaeologists as the reputed site of the battle between Edmund Ironside and Cnut in 1016.

Dealing with the results of the work of 1909, the conclusions point to the fact that the Canewdon Red Hills differ in several important features from any Red Hills previously examined, and their examination, although barren in some respects, is valuable in others. There is notably an almost complete absence of the familiar briquetage, while on the other hand the red earth is of a more compact and homogeneous character, and gives generally the appearance of having undergone some process involving washing.

During the year 1910 the Committee received from Dr. Flinders Petrie a memorandum in which he puts forward with much confidence the view that the Red Hills are the sites of late Celtic mounds for the burning of marine plants for kelp and the production of soda.

The Committee felt that the opinion of Dr. Flinders Petrie was one which called for the fullest consideration, and invited Mr. Jenkins, F.C.S., a member of the Committee, to examine the theory and apply to it such tests as were available.

Assuming that in accordance with Dr. Petrie's views marine plants were burnt, the only material other than marsh-grown plants available is the *Zostera marina*, a thin ribbon-like weed growing under water and plentifully in the Blackwater River.

There is also at the present moment a large family of plants growing on the marshes and saltings, for a list of which I am indebted to Mr. J. C. Shenstone, F.L.S.

The Committee has also been in correspondence, in connexion with the soda theory, with Messrs. David Brown, soapmakers, of Donaghmore, co. Tyrone, who claim to be the only makers in Great Britain still using the ashes of marine plants in their manufactures.

The opinion expressed by Messrs. Brown is somewhat unfavourable to the theory.

The results of Mr. Jenkins's examination of Professor Petrie's proposals is, together with the memorandum itself, included in this report.

I had occasion to describe in our last report the remains of certain Late-Celtic industries in the Quiberon Peninsula, and the discovery of certain curious rectangular boat-shaped troughs, to

the manufacture of which some portions of the industries had clearly been devoted.

I am obliged to my friend Mr. Reginald Smith, F.S.A., for calling my attention to what appears to be the remains of a similar trough, and the accompanying illustration is from a sketch which he has been good enough to have made.

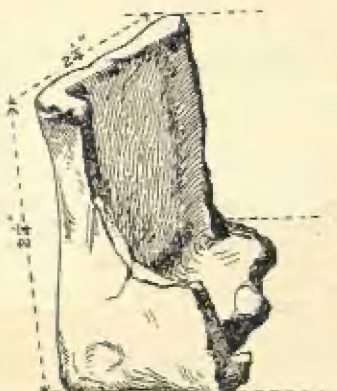


Fig. 1. FRAGMENT OF POTTERY TROUGH FROM BROADSTAIRS:
EARLY IRON AGE.

Mr. Reginald Smith says, 'It was found on the cliff at Dump-ton Gap, just outside Broadstairs, during excavations described in the current part of *Archaeologia*, and can be pretty accurately dated. . . . The Broadstairs fragment is of ware best represented in the Marne (Champagne) district, and ought to be pre-Roman, say first or second century B.C.'

The fragment illustrated agrees almost exactly in height with the Carnac troughs, although the base of the vessel in cross section is slightly larger.

The report of the Committee for the years 1908-9 has been prepared by Mr. Francis W. Reader, under whose superintendence the excavations have been conducted throughout.

The Committee is much indebted to him for the patient and unremitting attention which he gave, often under distressing climatic conditions, to the work, and for the valuable report which he has prepared.

I have also to express the thanks of the Committee to Mr. Edmund Marriage, of Fingring Hall, Ingatstone, for the permission which he readily gave to excavate on his land, and also to his bailiff, Mr. Lazell, who rendered much assistance.

The Rev. C. T. Hardy, the Rector of Canewdon, showed the



Fig. 2. MAP OF THE COAST AT GOLDHANGER, SHOWING THE POSITION OF THE RED-HILLS.

greatest interest in our work, and the genial hospitality which the members of the Committee received from him will not lightly be forgotten.

Mr. W. H. Dalton spent several days in the further preparation of the map of the Red Hills on which he is engaged."

REPORT OF THE RED HILLS EXPLORATION COMMITTEE,
1908-9, BY FRANCIS W. READER.

"Red Hill VIII Goldhanger. It may be remembered that, at the end of the former Report of the Committee, mention was made of the discovery of two flues at the edge of a Red Hill on Goldhanger Creek. These were at the side of a cutting that had been recently made in the red earth for the purpose of obtaining material for 'topping' the sea-wall. This cutting had partly removed one end of the flues, but, beyond an ill-defined appearance of something in the nature of a fire-place, there was little to be made out until we had further developed the excavation by taking a trench through it at the side where the surface was still undisturbed. This revealed two flues in section, and showed that they had been cut across at right angles (see plan, fig. 4, no. 1). Below them, in the clay mud of the marsh, was a mass of oyster and other shells, together with Romano-British pottery. These conditions were noted as being quite different from what had hitherto been met with during our investigations, but as no further examination was possible at that time, we filled in and covered up the flues until we were able to resume work in the following autumn of 1908.

Before describing the exploration of this mound, it may be well to say a few words about the site, as the position was more interesting and seemed to be possessed of greater possibilities than any of the previous sites we had examined.

The open marsh-land here is not extensive, but forms the eastern extremity of the land belonging to Bound's farm, from the cultivated land of which it is divided sharply by a straight line of 'fleet' running throughout its western side (fig. 3). On all other sides it is enclosed by the sea-wall which, on the south, fronts the Blackwater estuary and swings round the opening of Goldhanger Creek, following along its side. Its further limit on the north side is an old counter-wall, which marks the former line of the creek until it was cut off at the point where the sea-wall turns at right angles and runs due north for a short distance, before again turning to form the present head of the creek. This old counter-wall runs as far as the lane leading from Goldhanger village, to which point the creek formerly extended.

The land between these limits is a grass-grown marsh which is

divided in two by another fleet crossing it from west to east with an outfall by a sluice into the creek. The northern portion of this is known as Further Fish-pit Marsh and the southern portion as Hither Fish-pit Marsh. It is on the south-east corner of the former marsh that the Red Hill, which we have temporarily designated no. VIII Goldhanger, is situated. This is just within the sea-wall adjoining the entrance of the creek. An old trackway leads from the mound in the direction of the road from the village.

There are no Red Hills on Hither Fish-pit Marsh, but a few yards to the west of its south-west corner is a somewhat extensive one over which the sea-wall has been formed, so that a portion of it has been left on the foreshore and nearly destroyed by the tide. The portion on the inner side of the wall reaches for some distance into the cultivated field known as Twelve Acres.

Hither Fish-pit Marsh lies between these two Red Hills, and is remarkable for the number of artificial works which it contains. Close to the slightly higher cultivated land adjoining the farm are two mounds, but, so far as we could see by any signs on the surface and by digging some small trial holes, these seemed to be formed of ordinary clay soil and contained no burnt earth (fig. 3, a and b). Adjoining these to the south-east were several rectangular tank-like depressions surrounded by a low bank which had an opening at one corner (fig. 3, c, d, e, and f). All these signs of human activity suggested the possibility of their having been connected with the industry which produced the burnt earth of the Red Hills.

The Red Hill to which our attention was directed had, during the course of time, suffered so much mutilation that it would certainly not have been considered a suitable example to select for exploration but for its evidently novel character, which was disclosed in several places where turf and soil had been removed.

This difference was apparent mostly in the brightness of the colour of the burnt earth, which was a peculiarity difficult to describe, and one which would probably not have been recognized by any one unacquainted with the nature of ordinary Red Hill material. However, it at once attracted the notice of Mr. Wilmer and myself when on a visit of cursory inspection and led to the trial which disclosed the flues. In spite of the adverse conditions, it seemed important to examine what was left of this mound with the greatest care.

So far as could be judged the red earth seemed to have been of greater thickness where it was nearest the water's edge, as we have found in former instances. Only in a few places, however, was this thickness remaining to any extent. The largest portion was just in the angle of the wall where it turned at the opening of the creek, and it was here that the flues occurred. The middle of the mound had been wholly removed right to the top of the marsh

clay, which formed the salting surface when the red earth was deposited. On this surface, which was flooded at each tide owing to the defective sluice, the salting plants had again grown, but they were of an attenuated description owing to the enclosed conditions.

The extent of the mound on the south-east was marked by another patch of red earth that had not been much interfered with, and this reached nearly to the edge of the fleet, making its width from north to south about 100 feet. On the north side it was bounded by a rill which may have existed from the time when this marsh was an open salting. This rill is not now wholly dry, being fed by a spring. On the north the mound gradually tails out, and the earth of which it is formed becomes more mixed with unburnt soil, in consequence of which little of this portion has been removed.

On resuming operations the trench was opened up at the side of the flues and carried east and west of them. It was found that the flues were 18 inches wide by 2 feet deep, but the top had either been destroyed by removing the turf, or decayed by being near the surface. They were carefully made in the red earth and lined with a puddling of clay about one inch in thickness. This had burnt a deep yellow colour, while the dull red earth, in which the flues had been formed, had been turned to a bright orange for several inches at the sides. The interior of the flues was remarkable, they being filled with alternate layers of black ashes and clay which had burnt an orange or yellow colour. This filling was cleared out, and the flues were found to run parallel for a distance of 5 feet to the south, when they terminated in a roughly rounded end. Other sections were opened up and the ground carefully searched wherever the colour indicated anything unusual. This resulted in disclosing a large mass of hard burnt material a little to the south of the flues first discovered, which was a curious and indefinite construction, fairly flat on the surface, but reaching irregularly from about 1 foot to 3 feet 6 inches in depth into the earth of the mound (2, fig. 4, and fig. 5).

On the south side it was found that it rested in ordinary brown unburnt soil. This floor was burnt quite hard and was a bright yellow and orange in colour, and presented a striking difference from the usual dull brick-red colour and loose, light character of the Red Hill material. On its west side two flues were found also side by side running for about 8 feet into the centre of the mass, which extended for about another 9 or 10 feet in an easterly direction but in which no other flues were found.

This floor appeared to have been altered and re-made, and there were indications that other flues had been formed at a higher level and running almost in an opposite direction to the two in the west

portion of the floor. As these were in the surface soil and had been partly destroyed by the removal of turf, the portion which remained was somewhat decayed and difficult to trace. Those in the western portion, being beneath the hard floor, were intact, and were followed by breaking up the covering. They were formed parallel to each other, but they differed in construction and in the nature of their filling.

One resembled very much the first flues discovered, being filled with alternate layers of clay and ashes, but the other contained only some fine powdered black ashes. No entrance to either of these could at first be found, but in carefully clearing out the interior of *a* I found a small hole in the side near the top, 5 inches in diameter, which led to the edge of the mass. It was 12 inches in length, and was completely filled with small burnt twigs. The shape of flue *a* was curious, it being about 8 inches wider in the upper part and its section was similar to that of an inverted cottage loaf.

North of our first trench another similar floor was discovered (no. 3) but of smaller dimensions, being only about 10 feet by 13 feet, and it was not burnt into so hard and compact a mass, but was of a correspondingly bright colour. No flues were found in this, but one was discovered near by which was of a rather indefinite character except at one end where it was very similar to those first discovered.

A little to the north-east of this another pair of flues occurred just under the surface (no. 4). The turf had at some time been removed from this part, but the grass had grown again. As was the case with the first flues found, these had no covering like those on the west, but it is possible that if any such covering originally existed it may have been destroyed when the turf was removed.

These last flues were rather larger than any of the others, being 2 feet 6 inches wide. They were also filled with distinct layers of ashes and clay. The puddling of the sides had not burnt so hard as that of the other flues, but was of a bright yellow colour, as were also the layers of earth inside the flues, except where they were in contact with the black ashes where they had burnt a bright red. The ground surrounding and adjoining these had also been subjected to a subsequent firing in position, but it had been much dug into and disturbed.

The sections generally, apart from the occurrence of the flues and fire floors, yielded very satisfactory evidence. Several trenches were cut so as to open up the mound from the edge on the east side into the thicker remaining portion nearer the centre.

At the east end of the sections, which was the region occupied by the flues, a very different set of conditions was found from that of the end further in the body of the mound. The red earth

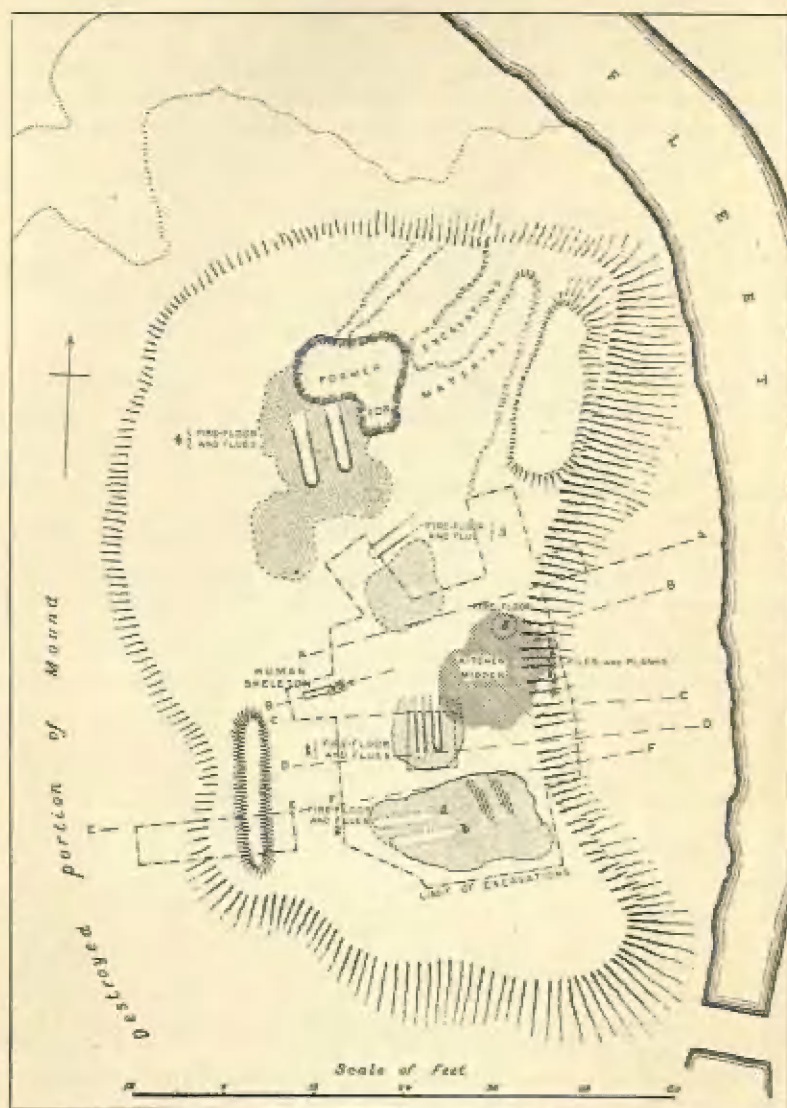


Fig. 4. PLAN OF PORTION OF RED HILL VIII GOLDHANGER, SHOWING POSITION OF THE FLUES, SECTION LINES, ETC.

was generally of the same description in both parts, but differed strikingly in structure. That at the edge of the mound was homogeneous, and contained only a small proportion of briquetage, and this was of a worn and abraded nature, while Romano-British pottery, animal bones, and oyster shells were in such quantities as to show considerable occupation.

These conditions gradually gave way to those ordinarily found in Red Hills as the sections were carried into the mound. The characteristic tip-like structure was well marked, large quantities

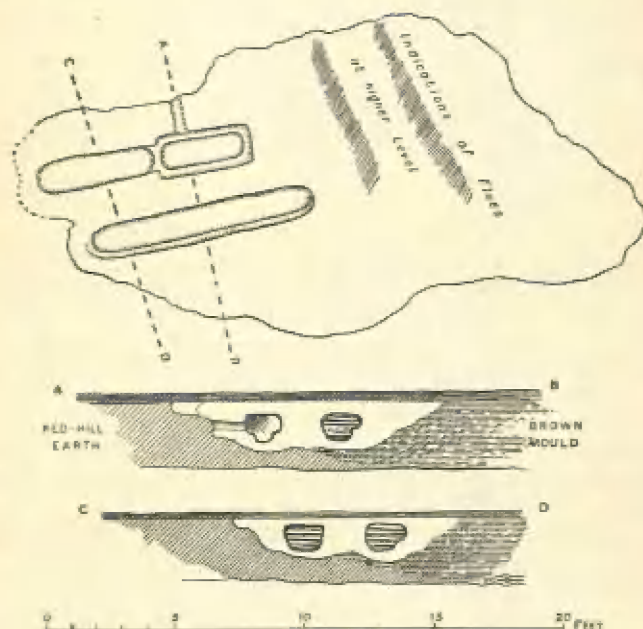


Fig. 5. PLAN AND SECTIONS OF FIRE-FLOOR AND FLUES NO. 2 RED HILL VIII GOLDHANGER.

of briquetage occurring in definite bands, and there was an entire absence of the domestic relics. There was the usual small proportion of pottery, which was of the same character as that we have so far consistently found in Red Hills. The so-called Samian and other wares of the Roman period, so plentiful in the region of the flues, were wholly absent in the west part of the sections. Moreover, the two regions were divided by lines of silt, which in places were well marked and showed clearly that the one set of conditions overlapped the other (sections A, B, C, D, E, and F in fig. 6).

Beneath the extreme edge of the red earth, at the point where the flues were first found, was a kitchen-midden of considerable size. This lay on the old salting surface, and was very black in colour. It contained masses of oyster and mussel shells, besides quantities of animal bones, many of which had been cut and split. Romano-British pottery was also abundant, especially portions of the large jars with the heavy roll rim of which there are several complete specimens in the Colchester Museum.

It was quite clear that the kitchen-midden had been deposited on the marsh at the side of the Red Hill before the burnt earth of the mound had been spread over it and the flues constructed. It was also evident that the flues, whatever their purpose, had nothing to do with the production of the mound or the burnt material of which it was composed. The side of the mound nearest the water had merely been occupied by the Romano-British settlers, and the material spread to form a suitable camping floor, while the flues may have been nothing more than cooking places.

The occurrence of flues and fire-floors in a Red Hill, even as the result of later occupation, is, however, so significant, that it may be well to keep in view the possibility of their having resulted from a modified form of the same industry of which the original red earth is the waste product.

The great difference between the regions marking the original mound and the subsequent occupation cannot be too strongly emphasized. Already some confusion has come about owing to the lack of recognition that the flues and everything associated with them form a solitary instance of an occupation of a Red Hill during the Roman period, and have no direct bearing on the origin of the red earth.

In the case of the original mound (the region marked with solid red on the sections, figs. 6 and 7) there are no indications of occupation. Pottery is scarce, and the distinctly Roman types do not occur. Animal bones and shells are practically absent, while nothing has been found in the nature of a working floor. Briquetage, however, is very plentiful.

The very reverse of these conditions is found in the second region (marked on the sections with red stipple). Here pottery of the Romano-British period occurred in large quantities and in great variety, the so-called red Samian being plentiful. Animal bones, many cut and split, oyster and other shells were found in abundance, not only in the kitchen-midden, but in Y, around the flues. Briquetage, in this part, occurred but sparingly, and appeared merely to have been derived from the original mound, through the spreading of the red earth, while the whole of this region was in the nature of a working floor in which definite construction is found in the form of the flues. In these flues no briquetage

was employed, nor was any found in association with them. It was clear that the kitchen-midden was deposited subsequently to the formation of the Red Hill, and on ground which was then a tide-washed salting. Still later the mound came to be spread in an easterly direction, which buried the kitchen-midden, and on this extension of the mound flues and fire-floors were formed by the Romano-British settlers.

It is also to be remarked that brown mould had formed over the red earth, and that in this, at places, the fire-floors had been laid. As it is improbable that brown mould could have formed until the marsh had been enclosed, it would appear that the sea-wall came to be constructed between the time when the kitchen-midden was deposited and the flues were made. And this was evidently during the Roman period.

It appears, therefore, that whatever purpose the flues may have served, their users enjoyed the shelter of the sea-wall, while all the original Red Hills were constructed on an open salting.

At the west end of one of the sections, and at the base of the original mound, a human skeleton was discovered. It was extended with its head to the east, and it lay in line with what was probably the sloping edge of the mound before its completion, the feet being at a slightly higher level than the skull. It was covered with about three feet of red earth, but it was not clear whether the body had been washed there by the tide or had been buried, but in any case it must have got there during the formation of the mound, as the stratification of the red earth above was undisturbed.

A trench was also cut through the western part of the mound. As before stated, this was formed of mixed soil, and passed finally into ordinary unburnt earth. There was a fair quantity of pottery, in which Roman and mediaeval varieties occurred. This feature of an addition to the mound of unburnt soil containing mediaeval pottery has before been noticed at Langenhoe, and the large Red Hill east of Goldhanger. In each case this addition has been on the side furthest from the water (fig. 3).

It was part of our original intention to explore the tank-like depressions on Hither Fish-pit Marsh, but during operations we learned that fish-pits had formerly been in common use in the district, and that three such pits had been constructed in comparatively recent times close to the coast-guard station on the sea-wall. Another pit on the east side of the creek had been in use within the memory of some of the inhabitants.

In former times fishing was an important industry at Goldhanger. When a large catch was made the fish were kept in these pits until required. It is said that corks at the end of

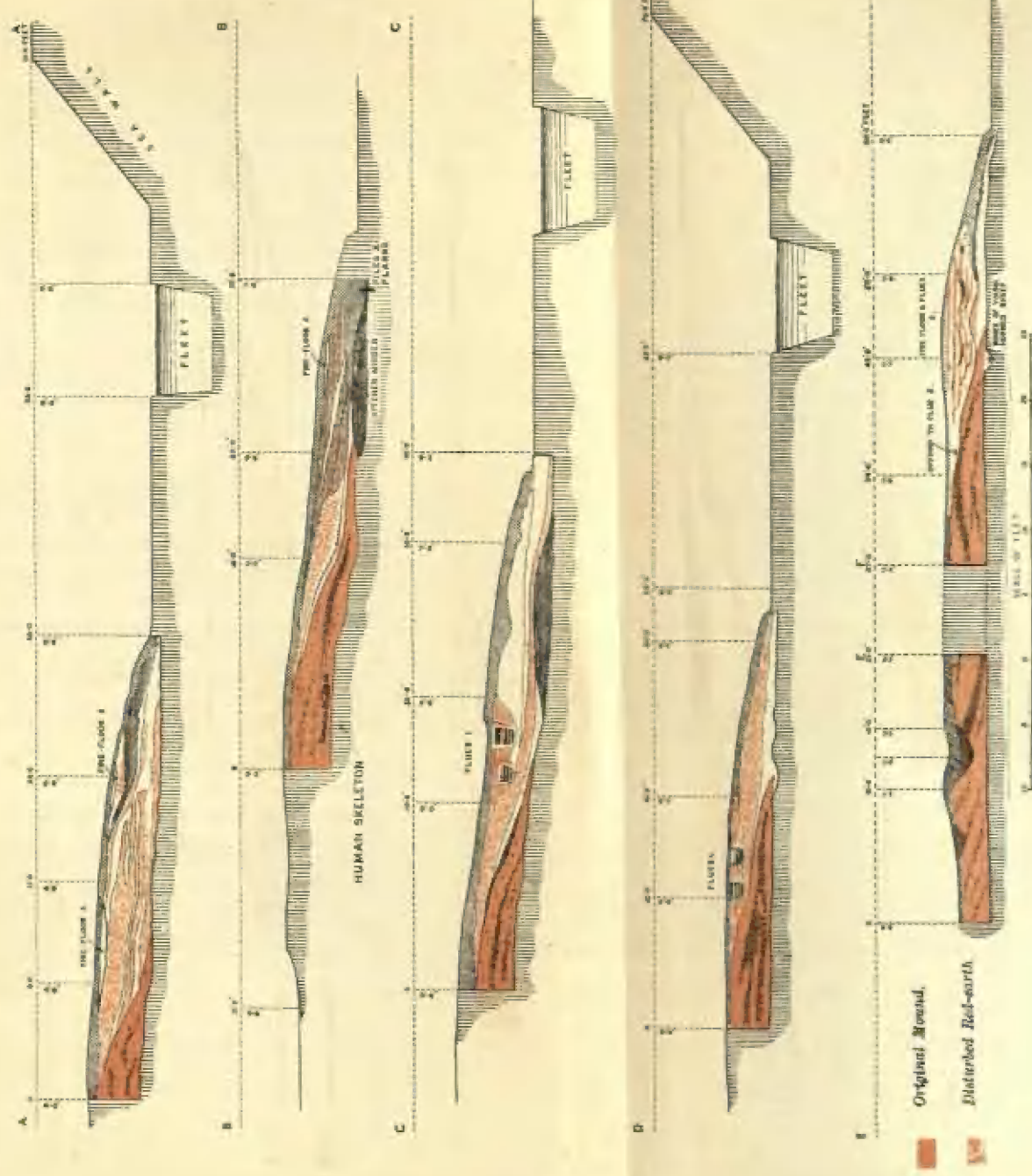


Fig. 6. SECTIONS OF RED-HILL VIII, GOLDHANGER.

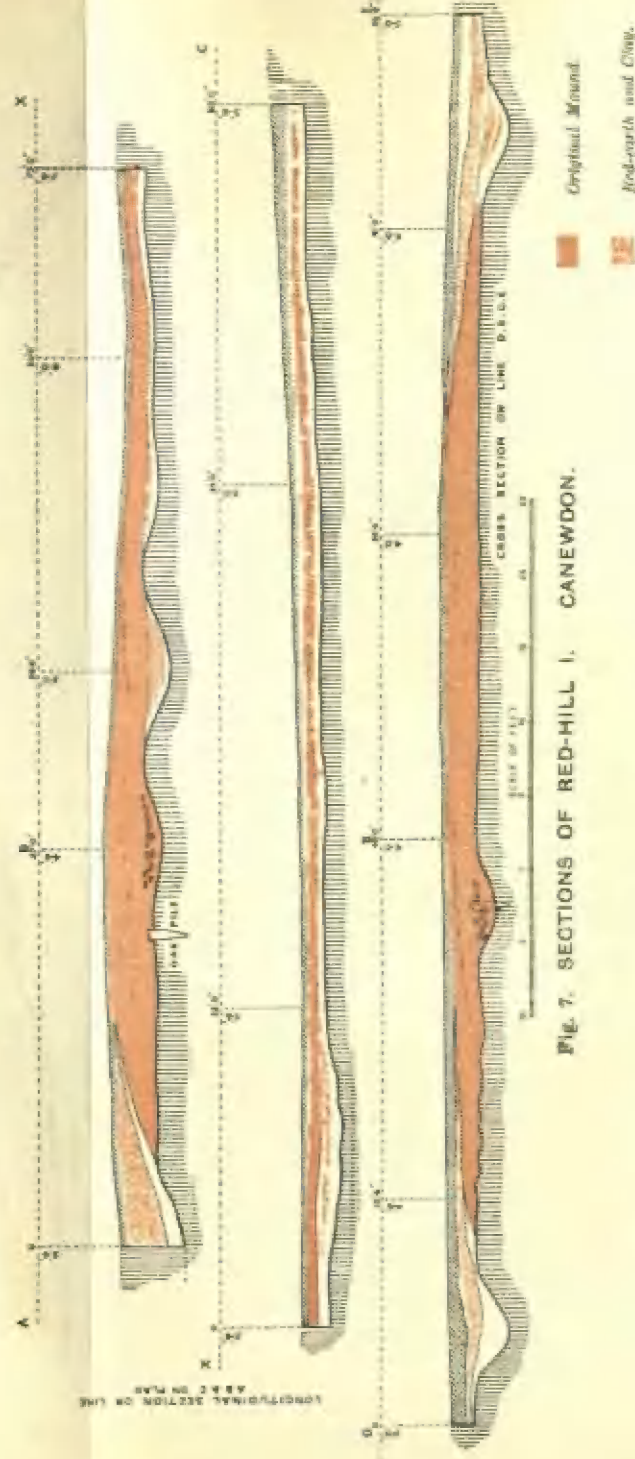


Fig. 7. SECTIONS OF RED-HILL I, CANEWDON.

strings were tied to the tails of the fish, and the corks floating on the surface made it easy to procure the fish when wanted.¹

The fish having now almost left this district the pits have fallen into disuse, and those at the coast-guard station are in a dirty and stagnant condition, while the one on the edge of the creek has been broken through, and is now used as a dock for repairing the boats. Owing to the resemblance of the tanks on the marsh to these fish-pits we concluded that they must have been intended for a similar purpose, and decided not to explore them as the season was advanced and our funds exhausted.

As further evidence of the once important fishing industry, not only does the marsh bear this name, but the roadway from the village is called Fish Street, and the old trackway across the marsh is said to have been made for the carts to bring the fish from the boats. In this connexion it may be well to recall the tanks which we excavated near the large Red Hill to the east of Goldhanger, on the side of Bowstead Brook. These were very similar in size and appearance, and appeared from the pottery we found to have been made in mediaeval times.

The possibility of these tanks on the marsh having been salt-pans should not be overlooked, although under present conditions they would in all probability be flooded at high tide were it not for the sea-wall. This point, however, has not been tested by measurements, and it is just possible that the bank around them, at its original height, may have been sufficient to keep out all but exceptionally high tides. The conditions of earlier times may, again, have been different from those at present prevailing, although so far as our investigations have thrown light on this matter, there is no reason to suppose that they were appreciably different at the time the Red Hills were constructed from what they are now. Slight earth movements may, however, have occurred during the interval and the earlier conditions again asserted themselves. The advisability of exploring these tanks might be considered by the Committee, with a view to making the investigation of this site more complete.

Another point of interest at Goldhanger was a large pile-foundation in the bed of the creek, which was exposed at low tide. Upwards of sixty large piles are arranged in rectangular form. It is said to be the remains of a tidal mill, but this rests only on tradition, while its position does not seem eminently suited for this purpose.

EXCAVATIONS AT CANEWDON, OCTOBER, 1909.

Operations in 1909 were carried out in the exploration of a small Red Hill at Canewdon on the side of the Crouch. Our previous investigations had all been restricted to the region of the

¹ See Mr. Laver's book, *The Mammals, Reptiles, & Fishes of Essex*, 19.

Colne and the Blackwater, and it was thought that the change of district might be attended with fresh evidence.

During a preliminary tour of inspection Mr. Wilmer and myself came across a group of slightly marked mounds of small size on the marshes at Canewdon, near Rochford. The situation, although some distance inland from the present river, is on the side of an old creek which formerly ran from Cricksee Ferry as far as Ashingdon, but which has been stopped at the head.

The spot is known as Torrington's Marsh, and is now a bleak, grass-grown waste, though in days of greater agricultural prosperity most of this land was ploughed. It is partly owing to this that most of the Red Hills in this district have become obscured, but many of them are still remembered by some of the older men who ploughed them in their young days (fig. 8).

The presence of the mounds we had selected for examination was indicated more by an abundant growth of thistles than by their elevation above the marsh level. A few rabbit holes, also, did more to reveal their real nature, and by this means the red earth and a few small pieces of briquetage were brought to the surface.

The disposition of the mounds in a group offered a novel feature, and suggested much more that they were the result of an *in situ* industry than did the mounds we have observed elsewhere, which usually lay along the line of the old high-water mark, and are separated from one another by a considerable interval of space. Exceptions to this rule occur at Salcott, where two exist closely side by side, each defined by a clearly marked ditch, and at Peldon, where they are found in close proximity; but in each case they form a chain of distinct mounds of considerable extent following the conformation of the water-line.

In this respect the Red Hills at Canewdon presented a new aspect, for we recognized what may be better described as three red earth patches, rather than mounds, arranged irregularly in a line which was opposed to that of the old creek on which they were situated.

Subsequently, others were found following the course of the creek in both directions. They were, so far as could be seen on the surface, small in extent and oval in shape, having diameters of only about 80 by 100 feet. They were therefore more capable of thorough examination than the larger Red Hills to which we have formerly paid attention.

The opinion has been expressed that the results of our previous diggings were inconclusive on account of an insufficient amount of the material having been removed, and the working centre, from which the burned material was produced, being thereby missed. To meet this objection we proposed to dig out entirely one of this group, and for this purpose the most definitely marked of the three patches was selected (no. 1, fig. 8, and fig. 9).



Fig. 8. MAP SHOWING THE POSITION OF THE RED-HILLS IN THE CANEWDON DISTRICT.

Practically the whole body of the mound which was visible on the surface was dug out, the space cleared being the largest we have yet made in any mound. It was about 70 feet in length, and varied in width from 20 to 35 feet, the portions selected for excavation being governed by the conditions as the digging developed.

Nowhere was any great depth of red earth found; even at the highest part of the mound its depth did not exceed 2 feet 6 inches, but it filled up hollows in the original surface of the marsh clay, which sometimes extended to a depth of 4 to 5 feet.

On the south it was found that the red earth was not confined to the mound as seen on the surface, but extended, though in a very shallow and mixed condition, for a distance of about 120 feet. As it was impossible to dig out the whole of this, we contented ourselves with driving a trench through it as far as its limit.

The shape of what appeared at first to be the extent of the mound was accentuated by a depression which followed round its south-west side, and this seems to have resulted from a deep hollow in the original surface (fig. 9).

The most striking feature of all this digging was the nature of the red earth, which was of a finer description than any met with hitherto. Similar fine red earth has been found, though only in patches, interspersed or side by side with rough material largely comprised of fragments of briquetage.

At Canewdon all the briquetage which was found could have been put on a wheelbarrow, and this was of an almost characterless description, most of it being broken up into very small fragments. Very few pieces exceeded 4 inches in diameter. Only two portions of fire-bars and one piece of a wedge occurred, and there was no other indication of the special forms which have been so abundant in other mounds. Slag, however, was in about the usual quantity, and there was a much larger proportion of the rough, thick flooring with unformed under-surface, which has been noticed in the other mounds, but in smaller quantities as compared with the briquetage. Here, however, there was quite twice as much of this thick flooring as of all other forms of briquetage put together, although possibly it was not in any greater proportion as regards the bulk of red earth when compared with former sites.

This flooring occurred mostly in masses, which appeared very noticeable owing to the fine nature of the red earth in which it was embedded. In view of the possibility of this being *in situ*, I spent much time in getting it out and carefully examining its condition. In each case, however, it was clear that it was not in its original position, but had been broken up and thrown where we found it.

This was plainly shown by the position of the fragments, which

had the formed surfaces turned indiscriminately in all directions, and the care taken in getting out this material served only to show that it was not in the place where it was used.

With the exception of the few patches of this rough flooring—and these were quite inconsiderable—there was nothing to break the fine character of the red earth, which exhibited in consequence very little of the tip-like stratification which we have been accustomed to see in previous Red Hills. Moreover, the close and continuous observation of such a mass of material led to the conclusion that it had been washed and treated in some manner before deposition. Much of the red soil in other mounds had this levigated appearance, but occurring as it did among layers of different material it was supposed that this had come about by the intermittent washings of the tide. The consistent nature of the whole of the soil dug out at Canewdon did not admit of this explanation. The briquetage, scarce as it was, would have been sufficient to show if the nature of the soil was in any way due to tidal action. There was not the slightest indication of this, as all the fragments were quite as sharp and unwashed as those found elsewhere. Thin bands of white clay round the edge of the mound occurred as in former instances, and showed that the tides had at least been round the mound during its formation. The consistent character of the material, and the unabraded nature of the objects found in it, point strongly to the fact that the material was of very much the same description at the time it was deposited, and there seems no reason to suppose that it has undergone any marked change by reason of time or the action of the elements.

The limit of the original deposit was clearly marked on the east, north, and west sides of the main mound by what might have been either an artificial ditch, or a natural rill in the old salting. Although red earth extended into this depression and also above and beyond it, this was so altered and mixed with tidal clay that it was easily distinguished from the original deposit.

This difference became more marked in the sides of our sections after a few days' exposure to the air, as it dried and split precisely as did the marsh clay, whereas the pure red earth dried in a homogeneous manner and displayed no visible effects from shrinkage.

In addition to digging out the whole of the main mound, several trenches about 4 feet wide were extended from it in order to cut across the ditch or rill, and it was found to run round the east, north, and west sides of the mound. It was not, however, found on the south.

The long trench cut across the extension on the south revealed red earth in considerable quantities, though this varied and was

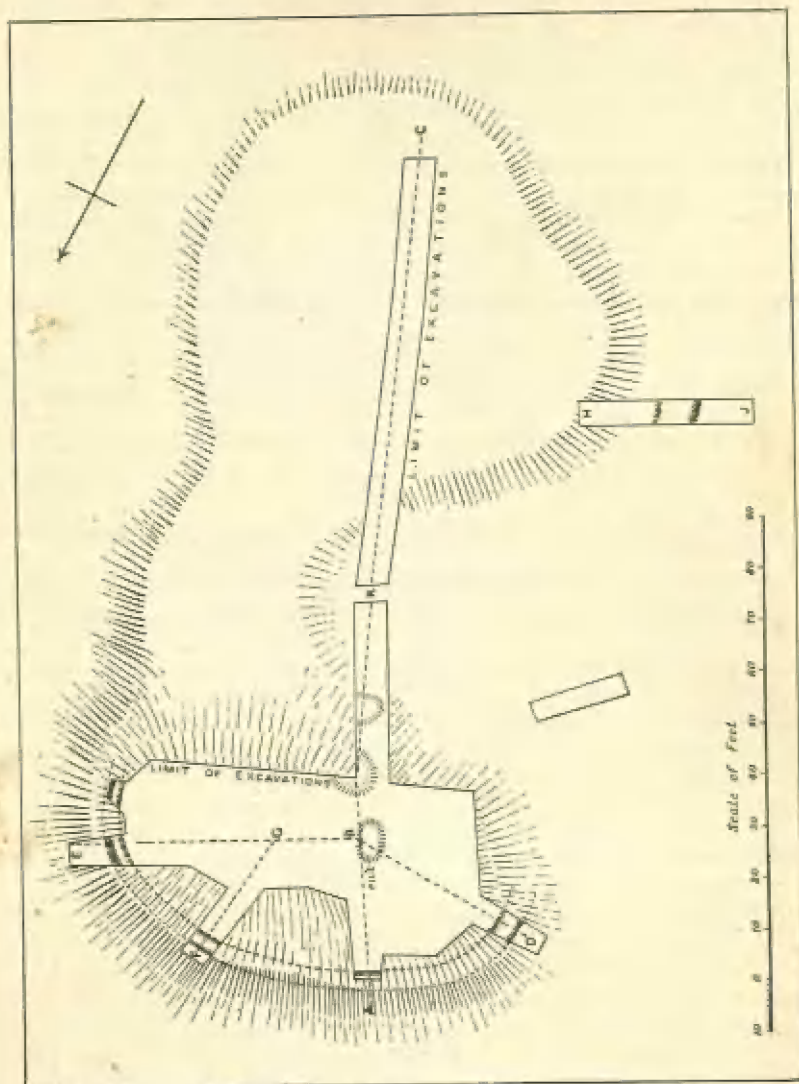


Fig. 9. PLAN SHOWING THE EXCAVATIONS IN RED HILL 1, CANEWDON.

of a different nature from the fine soil of the main mound. Besides being an altogether shallower deposit, it was considerably mixed with tidal clay, and showed plainly in places that it had been twisted and contorted by the action of the water. It was also of a rougher description, containing more ashes and a somewhat larger percentage of briquetage. It possessed no definite character, but appeared to be simply waste material spread on the original salting surface. Lying at a lower level, it had become moved in places by the tides and covered over with a good thickness of marsh-silt. This 'tailing out' of the material of a Red Hill is quite a new feature, as hitherto all we have examined have been in a compact and restricted mass.

The extent of this southern spread of red earth in other directions was ascertained only at a point on the west, where it was found for a distance of about 50 feet. It was here again bounded by a rill or ditch of a similar description to that which defined the greater part of the main mound. The conditions were not so clearly marked, but this may be accounted for by the comparatively small amount of red earth, there being only a thickness of about 6 to 8 inches of this material lying on the old surface, as it approached the edge of the ditch. Several streaks of red earth occurred also in the clay silt filling the ditch.

With the hopes of intercepting the ditch, another trench was dug between this point and the south-west end of the mound, but without result.

There are a few further points of detail that might be mentioned. Near the part marked B on fig. 9, in the south-west portion of the mound, were three holes apparently formed naturally in the original surface. The one directly adjoining B had been largely filled up with a quantity of the thick broken flooring mentioned above. At the side of this hole was the pointed end of an oaken pile sticking in the marsh clay. The second hole was remarkably filled with six regular and well-marked layers of red earth alternating with white clay, which occupied the depth of 1 foot 6 inches. These were clearly water-laid, and appeared to be the result of tidal action.

Regarding the relics, not only were the various forms of briquetage in singularly small quantities, but there was also very little wood ash, which on former sites has been fairly abundant. Several patches of black ash occurred in the trench through the southern extension, but even in these there were very few pieces of wood large enough for identification.

A few pottery fragments were found, these being of the Late Celtic period, and they occurred in very much the same sparse proportions as is usual. They were found fairly evenly mixed through the soil of the mound, and a rather larger proportion

was found in the rougher soil of the southern extension. Bones or other relics of ordinary domestic character were altogether absent.

Nothing less like a working site than the main mound has yet been met with in any Red Hill. The digging in the extension was not sufficient to give any definite result, but the appearance of the burnt material was generally much more what might be expected on a site where an industry was in progress, and it is not unlikely that further digging in the ground between the three pronounced heaps of burnt earth on this marsh might lead to a more definite discovery.

During the progress of the digging another small patch of red earth was discovered about 100 yards to the north of no. 1. This was quite close to the side of the old creek and adjoining a small mound of unburnt clay, known as Bonker's Hill, which is on the edge of the creek. The tradition is that this was where the barges used to unload before the creek was stopped. What appears to be an old roadway leads from this point to the higher ground, where its traces are lost.

Still further round the course of the creek, and on the same bank, is another and larger patch of red earth. Its position is curious, as the bank, which is capped with gravel, is high in this part and would seem to have been well out of the reach of the tides.

About half a mile north of the creek at this point a large Red Hill is to be found at Norpits. This is on the south bank of the Crouch, although it is quite on the edge of the marshes south of the present river and at a considerable distance from the sea-wall. The conditions of the river, however, appear to have undergone great changes even in comparatively recent times. This Red Hill comprises the whole space occupied by the dwellings and gardens of Norpits Farm.

About a mile to the west is another large mound at South Farnbridge, which was grown with mangels, and a little nearer the Ferry another patch was found on the marsh.

East of our digging at Canewdon red earth is said to have been found at intervals as far as Cricksee Ferry, but we were unable to locate it except at one spot below Canewdon Hall. There is, however, no reason to doubt that others are to be found, although they may be difficult to recognize until the ground is broken up.

Mr. Dalton spent several days in the district mapping the mounds, and located six on Wallasea Island. Mr. Wilmer paid several visits during the progress of the digging, and rendered great service, as on former occasions, with the levelling and in other ways."

NOTE ON THE ANIMAL REMAINS FOUND IN RED HILL VIII AT
GOLDHANGER; BY E. T. NEWTON, Esq., F.R.S.

"The bones found during the excavation of Red Hill VIII are for the most part those of domestic animals and present no special peculiarities; but it may be well to indicate the forms which have been found in the various layers: thus, in the *Kitchen Midden* (Roman), large ox, small horse, sheep, pig, pike; *Red Earth of Flue region* (Roman), ox (large and small), sheep, pig, dog?, and fish vertebrae; *Filling of Flues* (Roman), sheep, wild boar, dog? (head of femur); *Pot Hole under Flues*, sheep (young horned); *West Trench* (Roman and mediaeval), numerous fragments and broken bones of ox; *Original Red Earth*, one human skeleton.

The most striking fact with regard to these remains, and one probably of considerable import, is that a human skeleton was found in the original Red Earth, unaccompanied by any animal remains; while in each of the superimposed layers domestic animals were met with and no human bones. The absence of animal bones from the original Red Earth, therefore, is not to be accounted for on the supposition that they have been dissolved, for if this were the case the human bones would likewise have disappeared; unless, indeed, the human remains, which seem to be pre-Roman, were buried in a still more ancient Red Hill.

List of Animals found.

Man.	<i>Homo sapiens</i> , Linn.
Horse.	<i>Equus caballus</i> , Linn.
Ox.	<i>Bos taurus</i> , Linn (large and small).
Sheep.	<i>Ovis aries</i> , Linn.
Pig.	<i>Sus scrofa</i> , Linn (probably both wild and domestic).
Dog. (?)	<i>Canis familiaris</i> , Linn.
Pike.	<i>Esox lucius</i> , Linn."

NOTES ON THE WOOD SPECIMENS FROM THE EXCAVATIONS OF
RED HILL VIII, GOLDHANGER, AND RED HILL I, CANEWDON;
BY ARTHUR H. LYELL, Esq., M.A., F.S.A.

"Specimens of charcoal found at the Red Hills in 1908 were submitted to me by Mr. F. W. Reader for examination. They were found at three different levels or positions in the mounds, and the quantity and condition of preservation were nearly equal. The varieties also show a remarkable resemblance. The oldest specimens which came from the original Red Hills at Goldhanger, placed by Mr. Reader in the Late-Celtic period,

consisted chiefly of oak, with hazel, willow, hawthorn, and alder, in smaller quantities.

Oak was very abundant in the deposit assigned to the Romano-British period; but contained, in addition to willow, hawthorn, hazel, and poplar, several specimens of birch and lime and a small bit of horse-chestnut and a conifer. It is interesting to note the presence of the last three, as these might well have been introduced by the Romans, possibly as ornamental trees.

From the west trench, being a mixed soil containing mediaeval and Roman relics, oak, willow, poplar, alder, and hazel occurred, also what appears to be a small bit of honeysuckle.

Some specimens of charcoal from Canewdon site, said to be of the Late-Celtic period, also consisted of several specimens of oak with a small mixture of hazel, willow, ash, and common broom.

In the report of the excavations carried out during 1906-7 a small fragment of wood is reported as being elm.¹ On submitting the specimen to Mr. James Weale, of Liverpool, for a more careful examination, he pronounces it to be ash, *Fraxinus excelsior*. I hasten to point out this error, and hope that this correction will meet the eyes of those who may possibly have been misled by my earlier identification.

List of Woods found at Red Hill VIII, Goldhanger, in 1908.

From the original Red Hills. Late-Celtic period.

Oak.	<i>Quercus Robur.</i>
Hazel.	<i>Corylus Avellana.</i>
Willow.	<i>Salix</i> (?).
Alder.	<i>Alnus glutinosa.</i>
Hawthorn.	<i>Crataegus Oxyacantha.</i>

From the flues and the disturbed portion of the mound.
Roman Period.

Oak.	<i>Quercus Robur.</i>
Willow.	<i>Salix</i> (?).
Hawthorn.	<i>Crataegus Oxyacantha.</i>
Hazel.	<i>Corylus Avellana.</i>
Birch.	<i>Betula alba.</i>
Lime.	<i>Tilia europaea.</i>
Horse-chestnut (?).	<i>Aesculus hippocastanum.</i>
Conifer.	(?).

From the west trench. Mixed soil containing mediaeval and Roman relics.

Oak.	<i>Quercus Robur.</i>
Willow.	<i>Salix</i> (?).
Alder.	<i>Alnus glutinosa.</i>
Poplar.	<i>Populus alba</i> (?).
Hazel.	<i>Corylus Avellana.</i>
Honeysuckle (?).	<i>Lonicera Perichlymenum</i> (?).

¹ See *Proceedings*, 2nd S. xxii. 187.

From Red Hill I, Canewdon. Late-Celtic Period.

Oak.	<i>Quercus Robur.</i>
Willow.	<i>Salix</i> (?).
Hazel.	<i>Corylus Avellana.</i>
Ash.	<i>Fraxinus excelsior.</i>
Common Broom.	<i>Cytisus scoparius.</i> "

NOTES ON THE BRIQUETAGE FOUND IN 1908-9; BY FRANCIS W. READER, Esq.

"The briquetage found in Red Hill VIII, Goldhanger, was mostly found in the undisturbed portion of the original mound, and it was very abundant, occurring in well-marked layers of tip-like formation, as shown in the portion of the sections coloured solid red (fig. 6).

In general character the objects were identical with those found in the large mound, no. X, Goldhanger, which was explored in 1907, and from which so many objects were procured. Most of the typical examples were figured in the previous Report, and these have so close a resemblance to the great majority of the objects from Red Hill VIII that they appear to have been fashioned by the same hands in the same workshop. It would be a mere repetition to figure many of these, but a few of the more noteworthy pieces having distinctive characters will be found represented on figs. 10 and 11. Among these (no. 3, fig. 10), is a large pedestal of square form at the base, which is unusual, only one other squared pedestal having been previously found.¹ There is also the portion of a fire-bar (no. 2, fig. 10), which is interesting on account of some slag on its surface, which indicates, by the direction the 'tears' have run, that its position in the furnace must have been vertical. This, however, may have been accidental and due to a collapse during firing, but it is worthy of note. A piece of burnt clay having apparently the impress of a fire-bar is shown, no. 1, fig. 10. There is a large T-piece (no. 4, fig. 10) which has a curved shaft, and a curious piece of thin, flat slag with a turned-up edge.

The great majority of the fragments, as in the case of all Red Hills we have examined, are portions of the sagger-like chambers of the shape indicated by the diagram, fig. 13, and all the objects on fig. 11 appear to be portions of such vessels. Nos. 1 and 2 are top corner-pieces, no. 2 being, as is not uncommon, perforated. Nos. 3, 4, 5, and 8 have marks of wattles such as have been before noticed, but these are somewhat exceptional. Nos. 6 and 7 are portions of the edge of the open side, no. 6

¹ Report 1906-7, fig. 13, no. 5.

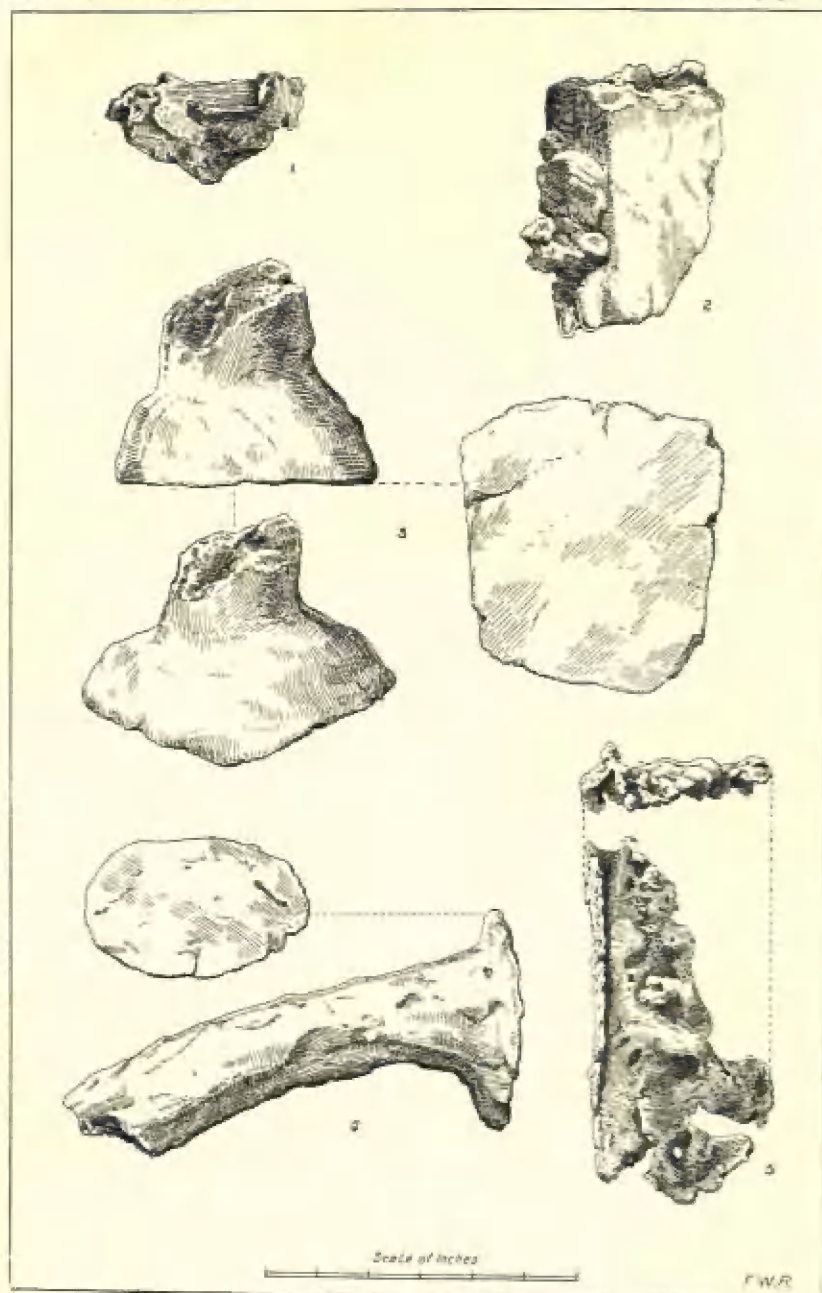


FIG. 10. BRIQUETAGE OBJECTS FROM RED HILL, VIII, GOLDHANGER

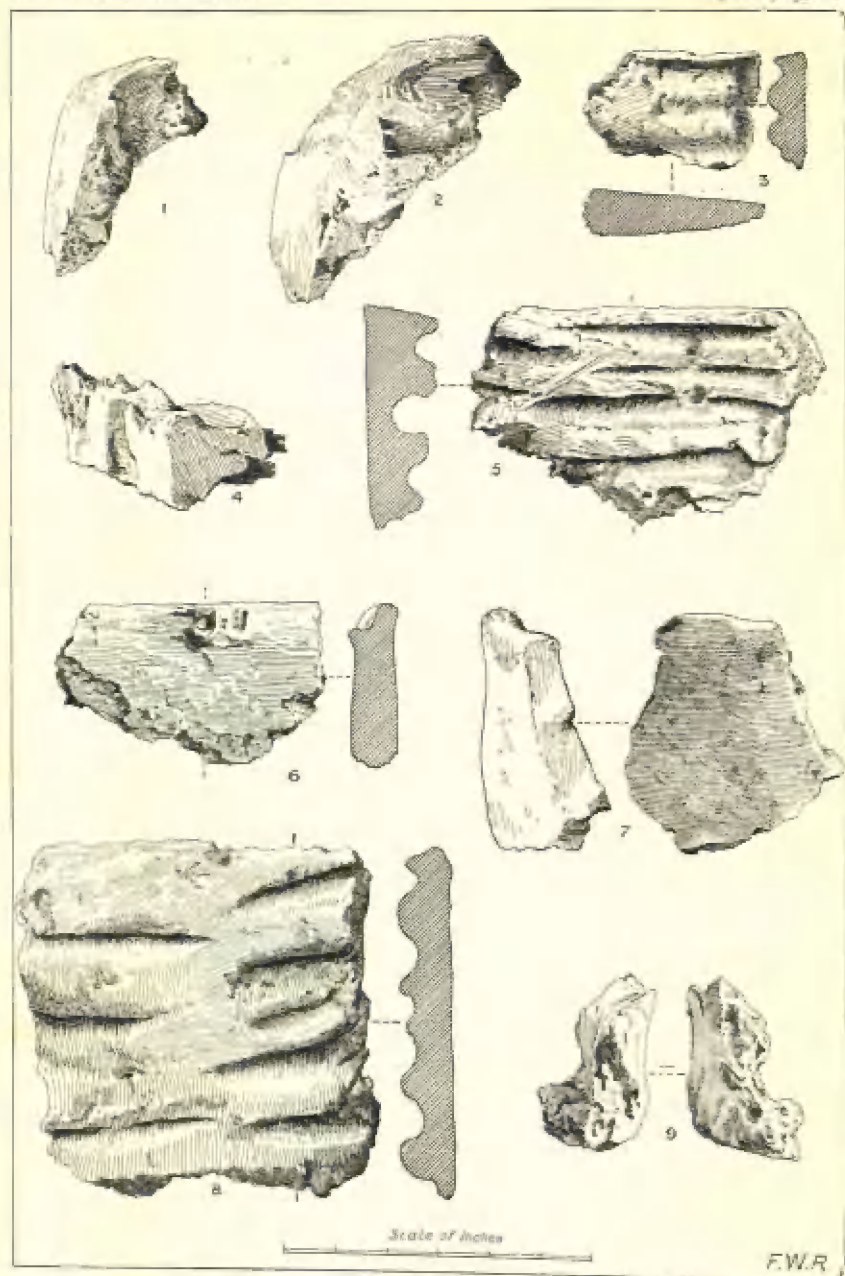


FIG. 11. SAGGER PORTIONS FROM RED HILL VIII, GOLDILANGER

F.W.R.

having two indentations as if something had been keyed into it. No. 4 is a bottom corner at the open side and shows the flat, roughly-cut surface.

The largest portion of one of these vessels was found in Red Hill, X, Goldhanger, but this was wrongly represented as to



Fig. 12. PORTION OF SAGGER FOUND AT RED HILL IX, GOLDHANGER.

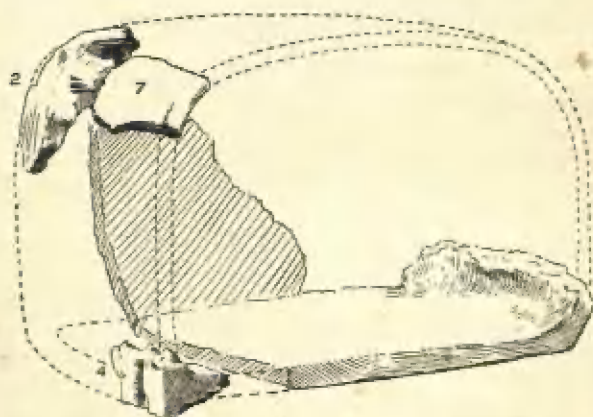


Fig. 13. CONJECTURAL RESTORATION OF SAGGER.

scale in the previous report (no. 4, fig. 17). It is therefore again reproduced here (fig. 12), and also projected with other fragments on the conjectural restoration (fig. 13).

All other special forms of briquetage, such as fire-bars, pedestals, T-pieces, etc., are in quite small proportions as com-

pared with the fragments forming parts of these chambers. The more definite shape of the special forms has led to a greater number of them being illustrated, and this seems to have created a wrong impression as to the proportion in which such objects occur.

At Goldhanger the special forms have occurred more plentifully than elsewhere, but even in this district they represent but a small proportion of the briquetage which was found, as the following table will show :

Portions of Fire-bars.	Pedestals.	T-pieces.
50	15	13
Total briquetage found (saggers and all other forms) 1 cubic yard.		
Red earth excavated (original mound only), about 40 cubic yards.		

Although briquetage of any description was so scarce at Canewdon it was possible to recognize the same characters among the small fragments which were produced, the greater proportion being clearly those of the sagger-like chambers, as we have found elsewhere. Pedestals and T-pieces were absent. This may be a local variation in the industry, but it should be remembered that these objects, although comparatively plentiful at Goldhanger, have occurred in other sites in isolated instances only. Fire-bars were represented by two portions, and there was one small corner of a wedge, but these were of precisely similar form to those found in other districts.

It seems evident, therefore, that whatever use these objects may have served, it was a special one for which they were best adapted, and that their shape had been arrived at after a long period of experience, as these objects, having the same peculiarities of form, have been found in Red Hills as far apart as the districts of St. Osyth, Langenhoe, Mersea Island, Peldon, Goldhanger, Canewdon, and Fowlness Island."

SUGGESTED ORIGIN OF THE RED HILLS; BY WILLIAM
FLINDERS PETRIE, Esq., D.C.L., LL.D.

"The careful exploration and detailed report of the Red Hill Exploration Committee lead to more definite conclusions than have yet been drawn. We have summarized the main results and the evidence which they provide.

The mounds are of burnt earth, and result from some industry which involved a large amount of burning in open air.

The mounds are of tipped earth that has all been handled or worked over after burning. Therefore the burnt earth was not the product required, but only a waste product. A large amount of earth was involved in the process, as a single mound was commonly an acre in size and the red earth from two to six feet deep, and there are hundreds of such mounds.

In the earth are fragments of burnt modelled clay, called 'Briquetage'. This is very rough and probably only used once or twice before it broke up. The forms are fire-bars about a foot long, supports about a foot high, and scraps of flat circular and rectangular trays or linings. Flues in the earth are also found, though but rarely. As no fragments are found of any baked pottery, or ore, or other material, it seems that the products of the burning were what were required, and not any other object which was burnt or baked. Even if these were the debris of potteries removed from elsewhere, it is incredible that wasters from the factory would never be thrown with the other waste products.

The position is nearly always at the foot of the slopes, or rarely upon lower slopes of land above the marsh edge, and generally at the head of creeks running up through the marsh. The purpose of such a position seems to have been to bring up marsh products easily to the place. It was therefore to burn some marsh or sea product, and not for the sake of land products. But it was for a marsh or estuarine product, as the position is never on an open seashore.

Throughout the burnt earth is a great quantity of fine charcoal powder; this must have resulted from a frail organism, such as leaves or weed, and not from twigs or sticks. The twigs are found quite distinct, apart from the charcoal powder, and they are twigs of a dozen different brushwood bushes.

The most decisive evidence of all is the slag which has run over some of the briquetage. The clay bed and the briquetage alike contain about two per cent. of potash and rather less soda. But the slag, which is like the clay and briquetage otherwise, yet contains three or four times as much soda as the clay, but no more potash. This is conclusive proof that the vitrifying was caused by the ash of marine plants or kelp.

Thus the various evidences brought to light show that kelp almost exclusively was burnt on the earth, but as it was damp it was heated by burning a relatively small amount of brushwood. It was supported on bars raised on pillars of clay, leaving tunnels about nine inches to a foot square for access of air. After burning, the ash was scraped up with the earth, and the salts were washed out, probably through a cloth, and evaporated for

transport, while the washed earth was thrown aside in tipped heaps.

At Quiberon there is a furnace clearly intended for heating the troughs which are found there and evaporating the solutions. And the clay bars across the tops of the troughs are naturally for holding up the cloth in which the earth was washed to remove the salts. These remains agree, therefore, with the purpose of kelp burning.

That a Celtic people would thus prepare kelp ash for soda is in accord with what we know. Kelp burning is down to modern times usual in Ireland, the Western Highlands, the Channel Islands, and France. It thus appears to be a Celtic custom. The use of the alkali was for soap, which Pliny says was an invention of the Gauls, made of tallow and wood ashes (*Nat. Hist.* xxviii. 51). And it was also prepared for glass-making, which was a Celtic manufacture, as in naming the preparation of sand by grinding and fusing with natron, Pliny adds that throughout the Gallic and Spanish provinces it was similarly treated (*Nat. Hist.* xxxvi. 66). We are also familiar with the Celtic art of enamelling, which required alkali for the vitreous paste.

Thus all the indications found in the Red Hills point to the burning of kelp for alkali; such a product was requisite to produce the Celtic soap and glass, and kelp burning has continued to be a custom on Celtic coasts."

REMARKS ON DR. FLINDERS PETRIE'S THEORY; BY J. H. B. JENKINS, Esq., F.C.S.

"With the failure of each successive Red Hill to yield evidence of any specialized *in situ* manufacture, the opinion is strengthened that the industry carried on was of some simple nature, leaving no débris of a distinctive character. But the absence of any distinctive remains makes the identification of a simple industry the more uncertain, and it is not easy, for this reason, to form a confident opinion about Dr. Flinders Petrie's theory that the Red Hills mark the sites of the manufacture of soda from the ash of marsh or marine plants.

This theory, as presented by Dr. Petrie, professes to account for almost every salient feature of the Red Hills, e.g.

1. Their position besides the estuaries;
2. The use of the so-called fire-bars and pedestal supports; and
3. The origin of the red earth itself, as well as its accompanying charcoal and slag.

In considering the theory, we propose to deal first with the *slag*, since Dr. Petrie regards this as yielding decisive evidence of the

nature of the industry, and conclusive proof that the vitrifying was caused by the ash of marine plants or kelp.

The facts are as follow: here and there in the material constituting the Red Hills some roughly vitrified or slag-like matter is found. As one would expect, the vitrification in these cases has been the result of alkaline salts coming into contact with the earthy matter at a very high temperature, and so fluxing it. As mentioned in the last report, three portions of this vitrified or slag-like material have been analysed, and in each case it was found that the alkali, the accession of which has effected the fusion, was almost exclusively *soda*, there being little, if any, increase of potash, and it is this fact that Dr. Petrie lays such stress upon in the development of his theory.

Assuming that the accretion of soda is a constant characteristic of all the slag, where should we look for the source of the sodium compounds? Considering that the Red Hills are immediately adjacent to salt- or brackish water, the first likely source which comes to the mind is sea-water.

Sea-water contains somewhat more than $3\frac{1}{2}$ percent. of its weight of salts, of which about four-fifths are common salt (sodium chloride). Further, the amount of total soda present in sea-water is about thirty times as great as the total potash; so that we have in sea-salt the excess of soda required by the composition of the slag.

We may prefer, however, with Dr. Petrie, to look elsewhere for the source of the necessary soda. For example, since the sodium compounds are in such excess in sea-water, we might anticipate that the seaweeds growing in it would share this property, and give us a corresponding excess of sodium compounds over potash in its ash. But this is not found to be so; ordinary seaweed has a selective affinity for potash, which is consequently found in large percentage in seaweed-ash. We remember that a century or so ago seaweed-ash was a common source of soda; but it is not so widely known that a main, commercial source of the potash salts was also *kelp*, the name given to seaweed-ash in a more or less fused condition.

It is evident, then, that the ash of seaweed, or kelp, because of its high content of potash (*vide* analysis below), would not be a likely source of the soda found in the slag; for if such an ash had produced the fusion, both potash and soda would have been high in the slag.

Apart from this chemical evidence, it may be doubted if low-lying, non-rocky shores, situated like those of Essex in the neighbourhood of the Red Hills, are suitable positions for an abundant supply of seaweed.

Certain seashore plants are known, however, of which Saltwort (*Salsola soda*) is the type, which yield an ash very rich in carbonate of soda. The more or less fused ash of such plants is named *barilla*.

Prior to the introduction of the *Le Blanc* process, soda was largely produced from the ash of these plants, especially in Spain, where the industry was so carefully guarded that it was a capital offence to export the seeds of the plants. In a sample of barilla I recently examined (*vide* below), there was found seven times as much soda as potash; so that such plants may have yielded the necessary soda to account for the composition of the slag.

We see, then, that if we attach the same significance to the nature of the slag as Dr. Petrie does, we have to limit the range of the plants burnt by cutting out the most abundant of them, seaweeds. But we can, to make up for this, amplify his theory in another direction, for if these barilla-yielding seashore plants were burnt, such plants must, almost certainly, have been specially cultivated for the purpose on the land adjacent to the Red Hills.

If we neglect the slag, however, we can conveniently follow a little further the manufacture of both kelp and barilla, since in each case the general method of production is alike.

In Spain, the seeds of the *Salsola soda* are sown at the close of the year in light, low soils which are embanked towards the seashore and furnished with sluices for admitting an occasional overflow of sea-water. The plants are cut down in the following September, and the seeds rubbed out and preserved for future sowing. The plants, after being sun-dried, are burnt, usually in October. For this purpose a crude furnace is formed by making a hole in the ground about 4 feet square by 3 feet deep, which is covered over by an iron grating. On the grating the dried plants are laid, stratified with dried reeds to promote burning. They are then set alight and fresh plants added until the pit beneath becomes filled with from 1 to 2 tons of barilla.

The manufacture of kelp from seaweed is on similar lines. The seaweed may be burnt in a furnace in the form of a round pit about 3 to 4 feet deep and 7 to 8 feet across, lined with stones, or a long, shallow trench may be made about 2 feet wide, 1 to 2 feet deep, and 8 to 18 feet long, or even more. The bottom of the trench or pit is covered with brushwood or heath, and a thin stratum of dried seaweed shaken lightly on it. The fire is applied to the leeward end of the furnace, and it is supplied, as needed, with fresh weed, until a sufficient quantity of kelp-ash has collected.

As distinguished from the method of burning barilla, where an iron grating is used, the burning of seaweed seems, according to all accounts, to be always carried on *in* the trench or pit, and not on fire-bars resting over them; but I know of no reason why bars should not be used, if there were any advantage.

Dr. Petrie's theory finds a place for the fire-bars and pedestal supports. We have to imagine with him a trench about nine

inches or a foot wide and about the same depth, with the clay fire-bars above resting, somehow, upon the pedestals or pillars of clay. The weeds, mixed with a small amount of brushwood, are laid on the bars and ignited. The burnt ash is scraped up with the attendant particles of earth, and the soluble salts are then washed out, filtered, and evaporated for transport, whilst the washed earth, with any unburnt charcoal and insoluble part of the ash, is thrown aside in tipped heaps, thus forming the red earth with accompanying particles of charcoal, etc.

In connexion with this, we may remark that in all the available accounts of the production of kelp and barilla, the ash is said to be prepared either in a fully molten or a partially fused condition; it is never prepared as a loose ash. If the weeds were ignited lying on the clay fire-bars in the way suggested, I should expect that the contact with the highly heated or nearly molten alkaline chlorides and carbonates would result in the clay fire-bars showing somewhat extensive glazing on the surface. I believe that this is very rarely the case. The evidence is rather that the fire-bars have not been exposed to such alkaline ashes at a high temperature. For this reason I am not disposed to accept as likely the suggestion that the seaweeds or soda-yielding plants were burnt lying directly on the clay fire-bars.

As to the further development of the theory, I think the evidence is much more speculative. We do not find in the Essex Red Hills anything to correspond to the little troughs found at Quiberon (illustrated on page 46 of the last report); but if they were found, I should not agree that they indicated the means for filtering and evaporating the lechings of kelp or other ash. It is difficult to conceive any vessels which, by virtue of their size and shape, are less suitable for such a purpose. Besides, if the soda were not to be applied to further manufacturing purposes on the spot, it appears very unlikely that the extraction of the soluble constituents of the ash, and the further filtering and evaporating, would be done there. It would be much more convenient, in accordance with general custom, to send away the product in the compact, semi-fused condition, as kelp or barilla, to be converted into soda elsewhere.

And further, as to the suggestion that the burnt earth composing the Red Hills is simply the accumulated dirt originally attaching to the plants before burning, or otherwise brushed up with the ashes, I think that is quite inadequate to account for the vast accumulation of red earth forming the largest Red Hills. Without troubling you with the figures, I may say that some calculations I have made suggest that thousands of years would be required to produce such mounds in the way suggested; and again, if the ashes had been extracted with water, only the soluble

constituents would have been removed, and we should expect to find throughout the red earth some chemical evidences of the presence of the insoluble constituents of the ash which would have been uniformly cast aside with it; but this is not the case.

To sum up, our view is that Dr. Petrie's theory may be correct to this extent: that some kind of barilla or kelp was produced on the sites of the Red Hills; their position lends support to the suggestion, and so, perhaps, does the composition of the slag so far as barilla is concerned. But there is little to be said for it which might not be also advanced on behalf of one or two other theories, e.g. that the mounds are connected with the manufacture of salt from sea-water. There is very little evidence in favour of either theory.

Whether, however, this theory be correct or no, we are indebted to Dr. Petrie for advancing it. The comparison of a theory with the evidence is always suggestive, and valuable as tending to bring facts into prominence which might otherwise be lost sight of. The theory will take its place with others, to be examined further in the light of future evidence.

I should mention here that in connexion with this theory some members of the Committee, in considering if there were any estuarine plants growing in large quantities in the neighbourhood of the Red Hills and suitable for burning for soda, picked upon grass-wrack (*Zostera marina*). I have come across a record of this weed being used in Jersey for burning for a kind of kelp. A quantity of this was obtained by the Hon. Secretary from the Blackwater, not far from Goldhanger, and I have analysed its ash. It shows a composition very similar to that of some of the common seaweeds. There is but little alkalinity, different portions of ash being alkaline to correspond to from 2.4 to 4.5 percent. of carbonate of soda. The total percentage of potash was high, nearly four-fifths as much as the soda, so that it would not help us in accounting for the composition of the slag in which the potash is low. This grass-wrack, therefore, seems to be as unlikely as ordinary seaweed. I give below the analysis of the *Zostera* ash, and also some figures for a sample of barilla, received, through our Secretary, from Mr. David Brown, of Donaghmore, Ireland, barilla being still used by him in the preparation of soda for soap manufacture. There are also some figures for a sample of kelp from seaweed, as now prepared in Brittany, received from Dr. W. M. Tapp.

Perhaps I may be allowed to add a few remarks as to a future direction of examination of the Red Hills, and consideration of the evidence. I think it would be valuable if we could have a careful opinion expressed whether the Red Hills are invariably found beside creeks or estuaries, and never beside the open sea.

The general disposition of the hills by the creek-sides seems rather to suggest that the positions were chosen as suitable for water transport of the products of the industry to some other parts. At any rate, it would be significant if there were evidence of the avoidance of the sea-front, an avoidance that would seem unlikely if the preparation of either seaweed-kelp or salt were the object of the industry.

The attempt should be made, too, to find out the conditions of heat and exposure necessary to produce the burnt red earth from the adjacent clay. This would require some experiments; but the conditions, if discovered, should be valuable in the consideration of any theory.

Again, it would be well if a larger number of pieces of slag were examined, drawn from hills as far apart as possible, to see if the high soda and low potash remain characteristic.

And one other point: in the sections through the hills, layers of charcoal are sometimes cut through. It would involve a good deal of spade work, but I think it would prove valuable if, when one of these prominent, more or less horizontal layers of charcoal were come across, an endeavour were made to trace the limits of the layer of charcoal laterally. It might be possible thus, not only to see the extent and shape of the charcoal-flooring or layer, but a close examination might show whether the pieces of charcoal are simply the remains of incompletely burnt wood, indicated by the presence of ashes outside the charred interior, or whether they represent true charcoal, i. e. wood intentionally heated out of free contact with the air.

Analysis of Ash of *Zostera marina*, taken from the Blackwater, Essex; also of samples of *Barilla* and *Kelp*.

The sample of *Zostera* was first dried at 100° C., by which it lost 73.4 percent. of water. The dried sample was then ignited at a low temperature and yielded (mean result) 30.8 per cent. of ash, calculated on the dried plant. The analysis of the ash gave the following results:

Soda, Na ₂ O	21.0 %
Potash, K ₂ O	16.7 %
Lime, CaO	4.0 %
Magnesia, MgO	9.6 %
Chlorine, Cl ₂	29.0 %
Sulphates, SO ₃	6.7 %
Phosphates, P ₂ O ₅	1.2 %
Silicates, etc. (insol. in HCl)	18.3 %

Some figures for *Barilla* and *Kelp* compared with those of the *Zostera marina* ash:

	<i>Barilla</i> (Ireland).	<i>Kelp</i> (Brittany).	<i>Zostera marina</i> Ash.
Soda, Na_2O	26.9 %	14.8 %	21.0 %
Potash, K_2O	4.1 %	22.2 %	16.7 %
Chlorine, Cl_2	11.4 %	20.3 %	29.0 %
Insoluble in water	36.4 %	30.2 %	41.8 %
Alkalinity (calculated to Na_2CO_3)	27.6 %	4.4 %	2.4 to 4.5 %

The barilla and kelp were of a very similar appearance; they were of dark-grey colour and semi-fused. The barilla showed a tendency to effloresce. For the direct manufacture of sodium carbonate it is the alkalinity which is significant, and the great superiority of the barilla in this respect is obvious."

W. DALE, Esq., F.S.A., read the following Report as Local Secretary for Hampshire:

"The first item of my Report relates to the discovery of a deposit of worked flints which was made in October last by Mr. O. G. S. Crawford, of Newbury, at Norman Court Farm near Clatford station, about two miles from Andover in the upper part of the valley of the Test. Mr. Crawford communicated his discovery to the British Museum, and acting on the suggestion of Mr. Reginald Smith, I visited the gravel pit three times and examined the spot thoroughly. The worked flints found by Mr. Crawford were regarded by him as belonging to the Palaeolithic Age, and he suggested for them the name of Magdalenian, a term applied by our friends abroad to the latest division of the Palaeolithic period. I have no record, however, of any Palaeolithic implements so high up the valley of the Test by a dozen miles, and on paying a preliminary visit to the gravel pit, I doubted if the section were of Quaternary age at all. On referring to the memoir of the Geological Survey which accompanies the Andover sheet, I found my opinion confirmed. The officers of the Survey report that 'gravelly and sandy detritus brought down by rain exists in the lower parts of most of the valleys of the Test, merging into the banks of gravel which occur more or less continuously along the larger valleys. The flints in this gravel are very little worn, as if fresh from the waste of the chalk or clay with flints. The gravel appears to be the result of rapid accumulation, and seems made up in places of partially destroyed tracts of clay with flints and not truly valley gravel.' The memoir further mentions that bones have been found in the gravel, without giving particulars, and they do not record the discovery of any palaeoliths in this district.

Whatever the age of the gravel, however, it is certain that the worked flints in question have no relation to it. The deposit in which they occur is not a brick earth, but simply a rich alluvial soil such as one would expect to find on the banks of a river. It

is of varying thickness, and, as is often the case, occurs in pockets or hollows. Several of these hollows could be seen on looking round the section exposed by the digging of the gravel, and in one of them, on the side nearest the river, the flints, bearing signs of human workmanship, were discovered by Mr. Crawford. On my first visit I found some by digging myself, and, as the hollow seemed to be worth clearing out, I obtained permission from the owner of the pit, and a few days after hired a couple of men, by the help of whom I dug over all the hollow for a space of about ten feet wide, and as far back as the pocket extended, viz. about seven or eight feet. The whole of the flints I found are on the table. A third visit which I paid was for the purpose of ascertaining if the flints were confined to the pocket or distributed over a wider area. But although I examined all the other pockets exposed in the pit section, and made trial holes in other parts of the field, I found no more.

The flints occurred all through the top soil, from near the surface down to the junction with the gravel, but not in the gravel itself. They can hardly be dignified with the name of implements, and a glance at them, apart from the evidence of their horizon, is sufficient to show their Neolithic character. One is a scraper, but as it has upon it the lichen which is found on flints exposed to the air its presence among the rest may be accidental. Some of the flakes are fairly well formed, and there are several cores from which flakes have been struck, as well as one or two which may have been sling stones. A large proportion of the flints, however, are simply waste chips giving no sign of workmanship except in the blow which dislodged them. The spot was evidently a Neolithic chipping-place. It must have been merely a halting-place for a short time, as there were no burnt flints or other signs of human occupation. Flint flakes are very common all along the valley, and a few years ago I found a considerable number together in a deposit of tufa at Fullerton a few miles lower down. From the character of the cores I would suggest that the object of the flint-worker, whose halting-place has been explored, was to manufacture the small narrow flakes, which in the South of England seem to have been used for arrow points. Perfectly formed arrow-heads are scarce in the South.

It is noticeable that the patination on the flints is very slight. This arises from the clayey alluvial soil in which they occur, away from the influence of the chalk. It warns us that patination or incrustation is a very unsafe guide as to age. In this connexion I am showing a George III. shilling found under the Bar Gate of Southampton, which is as firmly cemented to a piece of flint by the ferruginous matter in the gravel as if it were a relic of the Palaeolithic age.

I exhibit on behalf of Sir William Portal, bart., a bronze dagger and bone needle which were found in a barrow on the Malshanger estate last year. The dagger was shown to me directly after the paper was read by Canon Greenwell and Mr. Parker Brewis on the development of the spear-head, and, as bronzes of this early type are by no means common, I asked Sir William Portal to exhibit his specimen in these rooms. In the paper referred to the authors speak of this form of implement as a knife-dagger, which eventually passed into the true dagger from which the spear-head was evolved. In the discussion which followed the reading of the paper, Dr. Arthur Evans said that the habitat of the early type of dagger of a form almost triangular was the east of Europe. The triangular dagger is placed by Professor Montelius so early in the Bronze Age that he mentions copper daggers occurring of the same form. He allocates them to the first period of the Bronze Age in the British Isles, coinciding with the end of the first period in Italy. He figures one (no. 204 in his paper) from Perthshire which is like the Hampshire specimen, but not so distinctly triangular. The nearest specimen resembling it in the British Museum which I have been able to find is one from Stanmore in Berkshire, also found in a barrow. It is in the Greenwell collection and is very badly preserved. One in the Arretton hoard is a later type, with three rivet holes and a rounded base. The present specimen is unusually stout, and its finely preserved condition adds to its interest. The bone needle was found in contact with it and has acquired the same patination. Sir William Portal says 'the barrow was a shallow one, and was in a ploughed field, where for possibly a century past it had been gradually reduced by the action of the plough. There were two or three inches of burnt substance just below the surface of the barrow in its present condition, and in this the dagger and bone needle were found.' This does not necessarily mean that it was a cremated burial, and from the age of the weapon it ought not to have been. The barrow also may not have been so much ploughed down. It may have been one of the low ring barrows which only have a slight elevation in the middle.

The iron implement or weapon is also shown by Sir William Portal. It came from a farmer at Polehampton, in whose family it had been for generations. It is said to date from the seventeenth century.

I pass now to modern times to speak of the doings of Town Councils and others.

Considerable interest was aroused at Christchurch last year by the report that the famous Jesse screen in the Priory Church was to be repaired or restored. There was a marked manifestation of local opinion against this, and the matter went no further.



BRONZE DAGGER AND BONE PIN FOUND IN A BARROW AT IBWORTH,
IN THE PARISH OF BANNINGTON, HANTS (1)

For the present, I believe, it is still in abeyance. After the visit of a large party of American tourists during the summer it was discovered that a piece of wood had been broken off one of the misericordes in the choir. The slide I am showing will give an idea of the damage, and as these interesting carvings may not be familiar to every one I have prepared two other slides of them in addition. The late vicar about the same time caused the railing in front of the Shelley monument to be removed. The monument is not an object of antiquity, and the iron fence round it was ugly; but the feeling was that the tendency should be to protect the monuments in our churches, and not to render them more easy of injury. The day has gone by when alabaster fingers and toes were broken off to be dissolved in water and drunk as a cure for consumption, but our church monuments still need protection.

A very determined effort on the part of the Town Council was made to do away with the ancient mill known as Place Mill, near the Priory. The project was to take away the machinery, knock out one end of the building, and turn it into a boat-house. The mill, though small, is a picturesque object.¹ It is close to the precinct wall of the Priory and, as far as the flooring, the ancient stonework remains. A resolution to do away with the mill and to let it as a boat-house was passed on October 21. A member of the Council at a subsequent meeting made the proposal to rescind this resolution. Meanwhile a local memorial in favour of preserving the mill was got up and signed by upwards of 400 persons. Letters were also sent by the Royal Archaeological Institute, the Society for the Protection of Ancient Buildings, and by the County Society of which I am secretary. The National Trust also came forward and offered to rent the mill for a year, to gain time and afford an opportunity for its purchase, so that its ancient character might be preserved. There was the usual breezy discussion. A prominent member hoped the Council would adhere to their determination, and not be frightened by a few sheets of paper scribbled upon. The societies whose letters had been read he should lump together and call the Society of Humbugs; to which another member retorted that in that case the speaker would make an excellent President. It was finally resolved that the mill should be let for £13 a year, the corporation undertaking to make some improvements in the machinery. This was carried by a majority of two, with a threat on the part of the dissentients to bring the matter up again. On paying a special visit to Christchurch last week to see how things were going, I was told that the flooring, etc. had been found so insecure that the machinery could not be repaired, and therefore it would no longer be used as a mill. The tenant, however, as-

¹ There was a mill here at the time of the Domesday Survey.

sured me that although his boats would be stored in the basement, the doorway would not be altered, nor would the machinery be removed or the building disturbed. I have since had a letter from the town clerk giving the same assurance.

The new vicar of Christchurch being the Rev. J. Cooke Yarborough, of Romsey, I have included in my slides a view of the new porch built at Romsey Abbey."

The Rev. G. H. ENGLEHEART thought that the small flint flakes exhibited were used as arrow-heads. He lived near a spot in Wiltshire where the greensand cut into the chalk, and every piece of flint found was worked and had been brought there. A well-worked arrow-head was of the rarest occurrence, and he concluded that the numerous small flakes were used for that purpose, as there was an abundance of these, often of triangular form.

The PRESIDENT remarked that humour was a welcome ingredient in a local secretary's report, and was not omitted from Mr. Dale's communications. With regard to the threatened alterations at Christchurch, he was glad to hear some weeks before that Mr. T. G. Jackson, the architect in charge, had no intention of restoring the Jesse screen, and disclaimed all knowledge of the proposal.

Sir WILLIAM PORTAL regretted that he had not been able to exhibit the bronze dagger at a recent meeting when the Bronze Age was under discussion. The barrow in which it was found was hardly noticeable and had been ploughed over for many years. As president of the Hampshire Field Club he fully recognized the valuable services rendered by Mr. Dale, and he trusted that the Society would second the efforts made locally to protect the screen and other monuments at Christchurch.

Thanks were ordered to be returned for these communications and exhibitions.

THURSDAY, 24th FEBRUARY, 1910.

CHARLES H. READ, Esq., LL.D., President, in the Chair.

Robert Henry Forster, Esq., M.A., LL.B., was admitted Fellow.

HORACE W. SANDARS, Esq., F.S.A., read a paper on the use of the Deer-horn Pick in the mining operations of the ancients.

The paper was accompanied by an exhibit of mining implements made from the antlers of the red deer (*Cervus elaphus*), and gathered from the prehistoric flint-mines at Cissbury and Grime's Graves in Britain, from Obourg and Spiennes in Belgium, and from Champignolles in France. Mr. Sandars also showed a very fine head of a red deer recently shot in Spain, and demonstrated by means of the antlers the purposes to which the different parts had been put in the fabrication of his tools by the primitive miner. He then described the tools, and showed that they consisted principally of the deer-horn pick, which took the form either of an implement which could be used with both hands where there was room in the shaft or workings, or an implement which could be used with one hand in confined places. He proceeded to point out the different phases in prehistoric flint-mining as evidenced by the "open-cast" method, as employed at Obourg, and the shaft-and-gallery method, as practised at Spiennes and in Britain, arguing that the former was less advanced from the point of view of the art of mining, and consequently more ancient than the latter.

Mr. Sandars dealt with the principles on which the prehistoric flint-miners, who used the deer-horn pick, sank their shafts and worked, approached, and lighted their mines; and showed that a similar implement was employed in ancient copper mines in the Province of Oviedo in Spain. He ended his paper by recalling the fact that the deer-horn pick was also employed in the prehistoric and well-known salt mines at Hallstatt in Upper Austria, where it was succeeded by, or possibly was contemporaneous with, a pick of copper or bronze hafted on to a wooden shaft, which was evidently derived in form from, and served the same purpose as, the deer-horn tool.

Prof. GOWLAND congratulated the author on his treatment of the subject, and was himself most struck with the ingenious classification of the deer-horn picks. A single-handed pick had been found at Stonehenge, and barrow loads of fragments showed that the chalk had been excavated by this method for the erection of the stones. Similar picks were originally used in Europe for mining copper ores, as was proved by excavations on the Mitter-

berg in Upper Austria. At the end of a gallery was found a considerable quantity of burnt wood and ashes, evidently due to the use of fire and water for splitting the rock, which could then be broken down with the deer-horn pick. This method survived till recent times in Japan and also, he thought, in Europe. The Japanese never used to sink a shaft, but drove galleries into the hillside. For artificial lighting they used a large whelk to hold the oil and made a wick of the pith of rushes; and the material was brought out in straw baskets by boys working on their hands and knees, as the galleries were not so large as some in neolithic mines. The galleries were not straight, but followed the ore when found in any direction, producing a plan much like those shown on the screen, except for the shafts.

Rev. J. W. HAYES had on one occasion seen a shaft 35 feet deep made from below upwards by means of a hand-pick, the excavated material falling into a wagon brought to the bottom through a gallery.

Mr. DALE observed that the pits were sunk to obtain flints saturated with water, in which condition they were much easier to flake than when exposed to the air for a few days. It was a question whether rough celts from 5 to 8 inches in length were used as mining picks. The Roman date of a deer-horn pick found at Silchester was not proved, and it had probably been brought in from the country, like a flint celt also found in the Roman town.

Mr. MABERLY PHILLIPS said that two industries connected with flint were carried on at Ling Heath near Brandon, those of mining and knapping. The miner passed two or three layers of flint in sinking a shaft of about 40 feet, at which level the best material was obtained. The excavated chalk was handed up from one stage to another, the ledges being about 5 feet apart.

Mr. GARRAWAY RICE recalled a visit to Cissbury in 1877 with the Director, when Mr. Park Harrison was excavating the prehistoric flint-mines there, and remembered seeing holes in the walls where tines of deer-antler had been driven in as wedges to split the chalk. The pits were funnel-shaped and 20 feet deep, with radiating galleries below, where artificial light was necessary. Smaller pits had since been found at West Stoke near Chichester, and the site seemed likely to prove a miniature Cissbury.

Mr. BRADFORD referred to a paper in which it was stated that there was no evidence for prehistoric tin-mining in Cornwall, and

Pliny¹ was quoted in support of that statement. The deer-horn pick found at Carnon was therefore of considerable interest.

The PRESIDENT drew attention to the extraordinary toughness of deer antler, and its suitability for mining tools. In the British Museum were lumps of chalk from the walls of prehistoric flint-mines showing the marks of such picks; and the preservation of finger prints on clay sticking to the handle was an interesting touch of realism.

MR. SANDARS replied that the prehistoric miner knew where to find a particular kind of flint that suited his purpose best and was not satisfied till he reached it, at a considerable depth in the chalk. The tin-mining pick cited from Cornwall was used in connexion with a stream work, and 50 feet of material had been deposited over it since prehistoric times.

Thanks were ordered to be returned to Mr. Sandars for his paper, which will be printed in *Archaeologia*.

MR. H. THACKERAY TURNER, F.S.A., called the attention of the Society to a proposal to enlarge, without any apparent necessity, the chancel and north aisle of Puddletown Church, Dorset, which was almost unique in being an unrestored church with the whole of its seventeenth-century fittings. This proposal, he thought, was in every way to be deprecated. He also exhibited lantern-slides of the more interesting features of the interior of the building.

The following Resolution, which had been prepared by the Executive Committee, was accordingly proposed from the Chair, and carried unanimously:

"The Society of Antiquaries of London, having heard of the proposed lengthening of the chancel and north aisle of Puddletown Church, is of opinion that such a proceeding, entailing the material alteration of the very valuable and complete seventeenth-century fittings of the church, is much to be deprecated, and the more so as the Society understands that there is no necessity for providing additional accommodation in the building."

The SECRETARY also called attention to a proposal to combine the benefice of St. Helen, Stonegate, with that of St. Martin, Coney Street, in the city of York, and to disuse the former church, which the local authorities were of opinion would be followed by its destruction, as in other like cases in the same city.

¹ *Nat. Hist.*, xxxiv. 47, quoted by Mr. Emanuel Green, F.S.A., in *Journ. Brit. Arch. Assoc.*, lxii. 154.

The following Resolution was accordingly proposed from the Chair, and carried unanimously :

"The Society of Antiquaries of London has been informed that it is proposed to unite the parishes of St. Helen, Stonegate, and St. Martin, Coney Street, in the city of York, and to close the first of these two churches.

When it is remembered that the closing of two other churches in the city, those of St. Crux and St. Lawrence, has led to their destruction after no long interval, it is clear that such a proceeding must be viewed with great regret by all antiquaries, and the Society suggests that every effort should be made to prevent the disuse of St. Helen's Church."

THURSDAY, 3rd MARCH, 1910.

CHARLES HERCULES READ, Esq., LL.D., President,
in the Chair.

The following gifts were announced, and thanks for the same ordered to be returned to the donors :

From Lord Avebury, F.S.A. :—*Præhistorische Zeitschrift*, 1909. Band 1, Heft 2. 4to. Berlin, 1909.

From the Author :—*A study of the fort of Dun Aengusa, in Inishmore, Aran Isles, Ireland : its plan, growth and records.* By Thomas J. Westropp. 8vo. Dublin, 1910.

The following were admitted Fellows :

Rev. Ernest Hermitage Day, D.D.

Reginald Blomfield, Esq., M.A., A.R.A.

It was announced from the Chair that at his own request Sir Edward Brabrook, Kt., C.B., Director, had been removed from his office of a Vice-President of the Society, for the reason that he would not be eligible for re-election as Director, if he continued to be senior Vice-President till the Anniversary.

The DIRECTOR thanked the President and Sir Richard Holmes, who thus became senior Vice-President, for their kindness in the matter.

This being an evening appointed for the election of Fellows no papers were read.

WILSON CREWDSON, Esq., M.A., F.S.A., exhibited (1) a latten crosier-head of the closing years of the twelfth century, with the Annunciation within the crook, said to have been found in the

roof of a house at Allingham, Surrey (see illustrations), and (2) two silver seals formerly belonging to the Colquhoun family. One of these seals has lost the stone on which the device was engraved, but is interesting on account of its swivel suspension. The other seal has a quatrefoil handle and bears the arms, *a chevron charged with a mullet*, with helm, mantling and crest, *a bird rising from a cap of estate*, with a background of two trees growing on hillocks and the legend *g aleri de qwptell*. The date is late fourteenth century.



TWO SILVER SEALS FORMERLY BELONGING TO THE COLQUHOUN FAMILY (3).

Lt.-Col. G. B. CROFT LYONS, F.S.A., exhibited four silver seals: (1) of late fourteenth-century date, with a shield of arms, *a chevron between three rooks*, hung upon a tree within a traceried panel, with the legend *Sigillum: Thome: de: Rokeby*; (2) of similar date, with a shield of the arms of Talbot (*a lion and a bordure engrailed*) within a richly traceried panel; (3) of early fourteenth-century work with the letter A surmounted by a crowned l, in a traceried panel circumscribed ** IEO: SUI: LEXUS: AMYS:*; (4) of early fifteenth-century date with arms, *an estoile between three crescents*, helm, mantling and crest, *a crescent*, and inscription on a scroll: *g' simonis * * cobent*.

Thanks were ordered to be returned for these exhibitions.

The Ballot opened at 8.45 p.m. and closed at 9.30 p.m., when the following were declared duly elected Fellows of the Society:



LATTEN CROZIER-HEAD OF THE TWELFTH CENTURY, OBVERSE ($\frac{1}{2}$).

As Ordinary Fellows :

The Hon. Sir Schomberg Kerr McDonnell, K.C.B., proposed
by the Council *honoris causâ*.

Edwin Landseer Lutyens, Esq.

Lewis John Upton Way, Esq.

Rev. Henry Danvers Macnamara, M.A.

Edward Owen, Esq.

George Francis Legge, Esq.



LATTEN CROSIER-HEAD OF THE TWELFTH CENTURY, REVERSE ($\frac{1}{2}$).

George Dacre Hardinge-Tyler, Esq., M.A.
Rev. Charles Wilmer Foster, M.A., Canon of Lincoln.
Edward Philip Monckton, Esq., M.A.

As Honorary Fellows :

R. P. Camille de la Croix, S.J. (Poitiers).
Señor Don José Ramon Mélida (Madrid).
Señor Don Guillermo J. de Osma (Madrid).

THURSDAY, 10th MARCH, 1910.

CHARLES HERCULES READ, Esq., LL.D., President,
in the Chair.

The following gifts were announced, and thanks for the same ordered to be returned to the donors:

From the Author :—*Accidents of an Antiquary's life.* By D. G. Hogarth, F.S.A. 8vo. London, 1910.

From J. R. Garstin, Esq., F.S.A. :—*The Neale Park Monument, Kilmolara.* By Rev. W. Carrigan, M. J. McEnery, and J. R. Garstin. 8vo. n.p. 1910.

From Messrs. R. Twining & Co., Ltd. :—*The Twinings in three centuries. The annals of a great London tea house, 1710-1910.* 8vo. London, 1910.

From H. St. George Gray, Esq. :—

1. *The gold torc found at Yeovil, 1909.* 8vo. Taunton, 1910.
2. *Excavations at Downend, near Bridgwater.* 8vo. Taunton, 1910.
3. *Excavations at the "Amphitheatre", Charterhouse-on-Mendip, 1909.* 8vo. Taunton, 1910.

The following letter from the Archbishop of York to the Secretary was read:

"Lambeth Palace, S.E.,
7th March, 1910.

DEAR SIR,

I beg to acknowledge the receipt of your letter of the 4th inst. and of the Resolution which you enclose. It is sufficient for me to say that I am as anxious as the Society of Antiquaries to make every security that the church of St. Helen, York, shall be preserved and used for Divine Service.

Yours truly,
COSMO ENOR."

The following were admitted Fellows:

James Fenning Torr, Esq., M.A.
Rev. Henry Danvers Macnamara, M.A.
Edward Owen, Esq.
George Dacre Hardinge-Tyler, Esq., M.A.

F. HAVERFIELD, Esq., M.A., LL.D., F.S.A., read the following notes on (1) a Roman inscribed tile from Plaxtol, Kent, and (2) the Corbridge "pottery shop" and other notes on Samian ware. He also exhibited seven specimens of the Plaxtol tiles lent by the authorities of the Maidstone Museum.

“A ROMAN INSCRIBED TILE FROM PLAXTOL, KENT.

Half a mile south-east of the village of Plaxtol, in West Kent, close to Allen's Farm, is the site of a Roman 'villa'. Many chance discoveries have been made there from time immemorial, and much was found, partly through excavation, in 1857 and 1858. In 1857 the conversion of a part of the site from ploughland into a hopfield yielded important though ill-recorded results, foundations of walls, traces of hypocausts, much Samian and other pottery, and some fragments of inscribed box-tiles, all of the same pattern. In the following year Major Luard carried out a small excavation in an adjoining ash-plantation, and brought to light a building 60 feet long, which (if I interpret his account aright) was



PART OF A ROMAN INSCRIBED TILE FROM PLAXTOL, KENT.

a bath-house or suite of bath-rooms, with hypocausts, apses, a cold bath, a furnace, and latrines. The discoveries of the two years lie close together, and presumably belong to one extensive 'villa', though proper excavations would be needed to determine whether that consisted, like Brading, of two or three detached structures, or, like Bignor and Woodchester, of one continuous range of building.

The most important item in the whole group of finds is furnished by the inscribed box-tiles, which form the subject of this note. These tiles are covered all over their four faces with an irregular pattern of raised lettering, impressed on the clay before firing and seemingly produced by a clumsily cut wooden stamp whose wooden fibre and rough hacking can be traced on the better preserved frag-

ments. The exact shape of the stamp is not clear to me. The inscription consists of three lines, and each line contains one word, which is repeated in identical lettering so far as there is space. These words are constant in their relative positions to one another, and they must therefore have been all cut on one block. They are all of the same length, about 7 inches, but as the illustration shows, they do not begin at the same points. I know not whether we should assume a barrel or cylinder stamp which could be attached to a handle and rolled along the surface of the wet tiles set



PART OF A ROMAN INSCRIBED TILE FROM PLAXTOL, KENT.

out in a row. Such a cylinder would have been about $2\frac{1}{4}$ inches in diameter and 6 inches in length. But there may be some other solution which I have missed, and I should be glad if any one could throw any further light on this detail.

The first line, or rather, the line which it is convenient to take first, contains in relatively small letters the word *parietalem*. The next line, written in larger letters inversely to the first, gives us *cabriabanu*, or possibly *cabriabantu*, for its V and the T of *parietalem* run into one another, and the crossbar might not only belong

to the T but also form with the V a combined TV (V). After the *u* is a mark which I take to be a stop, indicating the end of the word. In the third line the lettering is placed the same way up as in the second, and the letters are similar in size. Unfortunately, it has not been preserved so well as the other two, and cannot be restored from the existing pieces. We can only say that it contained a word of nine or ten letters, of which the last six are *icavit*. It is separated from the second line by a bar or ridge which ought to mark the end of the inscription, but which may be a mere slit in the wood. The whole seems to be a trader's advertisement or amusement, couched in Latin and cut in a fashion possibly meant to be decorative. *Parietalem* presumably denotes a tile for use in the wall of a house (*paries*), a common use for box-tiles. *Cabriabanu* or *Cabriabantu* seems to be a Celtic proper name, prob-



INSCRIPTION RECONSTRUCTED FROM FRAGMENTS OF A ROMAN TILE.

(The letters CAB in line 2 and IT in line 3 are admitted twice in order to show the form of repetition.)

ably that of the maker. A final *s* appears to be omitted, just as on Samian bowls we find Agedillu, Cintusmu, for Agedillus, Cintusmus, etc. The third word cannot be restored with certainty, but seems to be the perfect of some verb meaning 'to make'. *Fabricavit* occurs naturally to the mind, but the first three letters do not resemble *fab*. The rare *rubicavit* has also been suggested, but it does not suit all the conditions very well. In any case we have here a parallel to the much more legible Silchester tile, *fecit tubu(m) Clementinus*. The use of Latin is, of course, significant. At Silchester such *graffiti* prove that the lower classes in that town could speak and write Latin. The Plaxtol instance is still more interesting. It shows that the knowledge of Latin, and of written, not merely of spoken, Latin, possessed by the

Callevan townsfolk was not limited to the towns but spread also into the countryside.¹

I have taken my readings and reconstruction from seven fragments preserved in the Maidstone Museum: I have to thank the curator and other authorities for full facilities. The Liverpool Museum has also a fragment, in the Mayer collection (no. 6134). This seems to have been acquired by Mayer from the representatives of the eighteenth-century Kentish antiquary, Bryan Faussett, Fellow of the Society from 1762 till his death in 1776. It bears a label in Faussett's handwriting, which states that it was found about 1773 in London near Bishopsgate, 'on the site of the new Excise Office, once Gresham College, in Broad Street. It does not seem to me, however, very likely that examples of this elaborate inscription should occur in both London and Plaxtol, and I should prefer to think that Faussett's specimen was really found in Plaxtol, and that either he misunderstood or misstated the origin, or that at some time or other a wrong label has been glued on to the object. I have to thank the Liverpool authorities for allowing me to examine this fragment and for sending squeezes: it is much worn, and adds nothing to the Maidstone specimens.

THE CORBRIDGE 'POTTERY SHOP' AND OTHER NOTES ON SAMIAN WARE.

The *Proceedings* of our Society have lately contained several articles relating to Roman pottery. It may not be amiss that they should also include a note of the interesting and somewhat puzzling find known as the 'Corbridge Pottery Shop'. This find was made in the course of the excavations of the Roman site Corstopitum, now Corbridge, in Northumberland, in the year 1907, and was described soon after in *Archæologia Aeliana*² in the general report of the Corbridge excavations. Since that date

¹ For accounts of the 'villa' and remains found in it see Luard, *Archæologia Cantiana*, ii. 1-16, and Payne, *Collectanea Cantiana*, 179; for the inscribed tiles see Luard, p. 4, and plate 6. (In this plate the stamp appears three times, in no case perfect. At the top is a vestige of *parietalem* and a whole second line (*banu. cabriab*); the third line is wanting. In the middle, inversely to the top stamp, is part of the line *-icavit*, a whole line (*cabriabanu. ca*), and very faint vestiges of *parietalem*. At the bottom are traces of the lines *icavit* and *cabriabanu*. The tile has plainly been stamped three times, and care has not been taken to prevent the stamps from overlapping and obliterating each other's edges.) Luard succeeded, however, only in reading one line, *Cabriabantu*. From him it is quoted by Roach Smith, *Roman London*, 115, who cites wrongly from memory, and by Huebner, *Corpus Inscr. Latin.*, vii, no. 1238.

² 3rd series, iv. 247-56.

some further details have come to light, which may be here inserted, and the facts laid more completely before this Society.

I. The name 'Pottery Shop' is of course colloquial. But it is not altogether inaccurate. The 'Shop' is a small oblong room, some 9 feet wide by 23 feet long, with a tiny yard behind it, which fronted the main street, as it seems to be, of Corstopitum at a point where a smaller street runs into it. Close by are two large granaries and other noteworthy buildings of this important site. The room stands apparently on the foundations of an earlier structure. The masonry of its walls is not uniform, and the upper courses differ a good deal from the lower, while beneath its floor were found mixed soil, miscellaneous remains, including decorated Samian of the shape known as 37, and traces of an earlier floor. The floor itself lies almost on a level with the highest (that is, latest) surface of the adjoining roadway, and is not far below the present surface of the ground. No floor, as far as we can tell, was ever built over it. After it passed out of use the site must have lain empty. Itself, it is made of trodden clay, thickly if irregularly laid, and has been reddened by the heat of a fire which once raged almost all over it. Embedded in it were found two First Brass, one of Pius (Cohen 969, A. D. 152), the other of the younger Faustina, but dating from the same reign. On it, except at the extreme front of the room, lies, or rather, lay when it was opened, a stratum of burnt matter 6-7 inches thick, consisting of charred wood, ashes, a few coins, and many broken and blackened potsherds, with a heavy irregular deposit of red clay above. The potsherds lay packed closely together and were obviously no chance deposit. They were, indeed, grouped in three sections corresponding to their different characters. One small space was taken up by fragments of undecorated Samian; another, rather larger, by bits of common grey or brown ware with a few scraps of Castor, while quite half the area was filled with broken *mortaria* (*pelves*) made of a clay which, so far as we could discover, is indistinguishable from the clays now worked in Corbridge. Many of the pieces were found lying in the position natural to the fragments of vessels which have fallen down and come into pieces, and in some cases they could be put together and formed complete vessels again. The room, it was obvious, had once been a store or, may be, a 'shop' for pottery. Three different wares were housed on its wooden shelves, and the whole had been destroyed by fire. The red clay deposit overlying the whole indicates, perhaps, that the roof of the store was wattled or plastered.

A find of this sort is not only interesting for the realism with which it tells a story of human life. It is also valuable in that it affords chances for synchronisms between the various objects

which compose it. These objects, or most of them, necessarily belong to the same period, and if we can date one portion, we obtain a clue to the dates of many. Unfortunately, the chronology of the Corbridge 'shop' is not clear or easy. The shop seemed to occupy the latest level of Roman remains in Corstopitum, and there was naturally a tendency at first to refer it to the very end of the Roman occupation. But a consideration of the individual items does not bear this out. We have, indeed, a curious conflict of evidence between most of the objects on the one hand and a few of the objects and the level of the whole find on the other hand.

(1) The fragments of common grey and brown ware could not be dated with any certainty. But the mortaria rims, of which there were two main types, did not seem to us to belong to a late period, and Professor Schumacher of Mainz, to whom we sent specimens, replied that they corresponded closely with the finds made e.g. at Wimpfen, and must be assigned, at latest, to the period of Hadrian and Pius, that is, to the first half of the second century A.D. The Samian fragments may without difficulty be assigned to much the same epoch. As I have said, they are all unadorned. The bulk of them belong to straight-sided cups and deep saucers of the types numbered by Dragendorff 31 and 33 (in Mr. R. A. Smith's numeration of the Pan Rock types, nos. 7, 9, 10, 12, 13). These types, of which 31 is rather a group of types than one definite species, occur freely throughout most of the Roman Imperial period. They can be traced, as seems probable, as early as about A.D. 100 and as late as the fourth century, and almost every Roman site occupied within these limits yields them in large numbers. Of themselves, therefore, they help us little towards fixing dates. But they bear stamps *AIISTIVI M*, *ALBILLI M* (retrograde, five specimens), *GENIALIS FE[C]*, *GENITOR F*, *MACHINVS F*, *MARCI F* (*F* dubious), *PATERCLINI* (three specimens), *PATERNI*, *SATVRNINI* (N.B. *a*, not *A*), *SEDATIANI*, *VINI*, and three or four only imperfectly preserved. The stamps belong probably to the second century. One, *Genialis fec.*, occurs, for example, at Barr Hill (A.D. 140-180), and Dr. Dragendorff suggests to me that several of them might well be assigned to the earlier part of the second century. The style of the lettering is in general very good, and fits that period, while both the lettering and the names are entirely inconsistent with the practice of the fourth century. There are also nine fragments of a flat saucer (Ludowici, form Th; *Brit. Mus. Catal.*, No. 79), three of a flanged bowl (Drag. 38), two bits of a mortarium-shaped bowl with lion's head on the rim (Drag. 45), and one piece showing the moulding known to German writers as a 'Viertelrundstab', which belongs to the first and the earlier part of the second century. These were found in

the burnt stratum and show marks of fire. But the 'pottery shop' is not the only building in Corbridge which has been burnt down and has yielded fire-blackened Samian, and the nearness of its floor to the surface makes it just possible that one or two of its pieces may be external fragments intruded later. On the whole, it seems fairly certain that the pottery as a whole belongs to the second century. The fourth century appears out of the question.

(2) The coins tell a different tale. The list of those which can be identified with certainty, as revised for me by Mr. H. H. E. Craster for the purpose of this paper, is as follows¹:

1. Claudius Gothicus, PROVIDEN AVG.
 2. Tetricus junior, PRINC. IVVENT.
 3. Constantine II (as Caesar), GLORIA EXERCITVS.
 4. Constans, VICTORIAE DD AVGG QNN, mint-mark D-TRP.
 - 5-7. Constantinopolis, three specimens.
 8. Urbs Roma.
 9. Valentinian I, SECVRITAS REIPVBLICAE, mint-mark OF|II-CON.
 10. Gratian, GLORIA NOVI SAECVLI, mint-mark OF|III CON.
- Not later than A.D. 375.

11, 12. Two minimi.

All except 4, 9, 10 are of 'barbarous' fabric. These coins were found, as Mr. C. L. Woolley, the discoverer, records, in one particular part of the 'shop', and he was inclined to regard them as the remains of its till. This, however, is not very likely. Coins in a burnt till would probably be melted or otherwise heated together: these coins show no definite and distinct marks of ever having been burnt in a fire. Moreover, they are from one to two centuries later in date than the probable age of the potsherds, which were certainly involved in the fire. It seems probable, therefore, that they came into the deposit after the fire. They may be (as I at one time suggested) a small hoard or part of a hoard buried here late in the fourth century, but the ten datable coins stretch over 100 years, and they might be due to a variety of accidents. On the other hand, the two coins of the reign of Pius, which (as I have said) were found embedded in the floor, cannot well have got there after the burning, and that must surely have occurred after about A.D. 150.

It is, therefore, probable that the pottery store and its destruction date alike from the second century. It is indeed remarkable that a site in close proximity to important buildings and fronting a principal street should have lain waste without ever being utilized during at least two centuries of the Roman period. But

¹ The list in *Arch. Aeliana*, iv. 251, requires to be corrected by the substitution of nos. 3 and 4 above for two entries of Constantins.

since the pottery store was dug up in 1907, we have been able to examine a great deal more of Corstopitum, and we have found evidence to indicate that somewhat the same fate befell other buildings in its vicinity. Possibly when our work has proceeded further we may be able to date the various eras of destruction which befell the place, and we shall then be able to apply dates to our pottery without hesitation.

II. The 'pottery store' has a further interest. It is a deposit of undecorated Samian, with no admixture of decorated pieces. In this it resembles the well-known remains of a wreck on the Pan Rock in the Thames estuary.¹ That also consists of undecorated Samian, if we include under that title certain saucers with raised ivy-leaf or cordiform patterns on their rims, which (whether made in moulds or by the barbotine process) are akin to the plain Samian far more than to the highly decorated types (30, 37, and the like). The two deposits have much in common. Both, naturally, contain much of types 31 and 33, and the flanged bowl appears, though sparingly, in both. Both have some stamps in common, and, what is more significant, in at least two cases the identity is not merely of name, but extends to the minutiae of lettering. Thus, though the exigencies of type-setters have disguised the fact, *Saturnini* occurs in both deposits with Δ for A, and *Aestivi m* is spelt in both AIIISTIVIM. One might perhaps doubt if such stamps as, say, SATVRNINVS and SATVRNINI, or even SATVRNINI and SATVRNINI, necessarily belonged to the same potter and date, but two cases of SATVRNINI can hardly be separated. On the other hand, the Pan Rock yields more flat, plain saucers than the 'shop', and its contingent of saucers with cordiform ornament has no parallel in Corbridge. It may be somewhat earlier than its Northumberland counterpart.

The occurrence of two such deposits of plain Samian ware seems to demand explanation. I am inclined to suggest that perhaps plain and decorated Samian were sometimes kept distinct in trade and use. They differ artistically: they differ in their methods of stamping: they must have been very different in price. No doubt they were both manufactured in the same districts, and to some extent by the same men. But the leading potters of decorated ware do not seem to be the leading potters of plain ware. Indeed, numerous plain potters, and among them some of the most productive firms, did not make decorated ware at all, so far as we know. Thus, one may search the lists of decorative potters in

¹ For the Pan Rock see Mr. R. A. Smith's papers in the *Proceedings*, xxi. 263 and xxii. 395. The deposit of plain Samian found at the fort of Altbürg-Heffrich (not Pfluz) on the German Limes near Wiesbaden only contained ten Samian vessels and one other.

vain for most of the potters represented at Corbridge and the Pan Rock.

It is proper to add that Mr. R. A. Smith has suggested another view. He thinks that the absence of decorated Samian in the Corbridge and Pan Rock deposits should be explained by attributing both deposits to a date when decorated Samian of type 37 had gone out of fashion, or at least had ceased to be made at Lezoux. There was, he conjectures, an interval when the decorated Lezoux ware of type 37 had come to an end and the 'incised' and 'applied' ornamentations had not yet begun, and to this interval he ascribes the two deposits. The limits of this interval he puts at A.D. 160-190. In the present state of our knowledge this seems to me much too bold a conjecture. Let me say one word in passing about the date (A.D. 160) suggested for the beginning of the supposed interval. Recent German writers have tended, and perhaps rightly, to put the last days of decorated Samian bowls of type 37 earlier than they were put by Déchelette (*circa* A.D. 250). But no one, I think, has gone so far back as A.D. 160. Much collection of statistics, indeed, is needed before any hypothesis on the point can safely be ventured, and these statistics are not easy to come by. There are few sites in the Roman Empire which were occupied for the first time in the period A.D. 160-250, and the cemeteries which are useful for much of the second century, such as Flavion, Strée, Jusleville, Waucennes, give no very decisive testimony for these later years. There is, however, German evidence that bowls of the 37 type were in use considerably later than A.D. 160, and though at the moment I am unaware of proof applying especially to Lezoux, it seems, at first blush, unlikely that the Lezoux potters dropped type 37 while it was still being made elsewhere and while they were still active in other forms of Samian. But whatever the truth prove to be in this respect, there are perhaps reasons for dating the Pan Rock find earlier than A.D. 160. It includes some twenty to thirty specimens of plain saucers ornamented on the lip with a pattern of ivy or similar leaves, often styled cordiform. These saucers are generally supposed to have gone out of use about or a little before the middle of the second century, and the occurrence of a fair number of them at the Pan Rock is probably significant. The Guildhall Museum has a cup of type 27 which is ascribed by its label to the Pan Rock, and which, if rightly ascribed, helps this dating, since this type went out of use before about A.D. 150. If, lastly, one of the Pan Rock stamps is, as Mr. Smith suggests, the *Arici manu* of a 27 type bowl in the British Museum, a slight further indication of date is gained.

III. These conclusions are tentative. From their tentativeness I desire to draw a moral. I hold strongly the opinion that many

recent efforts of archaeologists to date Samian ware have gone too far. I find in books and papers which have some claim to be called authoritative far too much both of unproven conjecture and of demonstrable error, and these guesses and errors are copied by the smaller students in a way which is likely some day to cause serious trouble. The evil works somewhat as follows: Men are told, or deduce from the books which they consult, that such and such pieces of pottery date from, let us say, before A. D. 70, or that such a bowl is Rutenian. When they publish, they repeat these statements, and, as illustrations cost money, they add no means by which readers can check them. The truth may be that the pieces are a good deal later than 70, and the bowl is Lezoux fabric. But the wrong statements pass into our record and serve to mislead the future historian.

I do not wish to give instances. I am aware, by my own experience, how easy it is to date potsherds wrongly, and instances accompanied by names and details might seem a severer criticism on individual workers than I have any desire to make. But I do wish to urge even an excess of caution on those concerned with the study of Roman pottery. Some points, of course, are certain, and sceptics who refuse these deserve their full share of blame. But any glance into recent English or German work on 'Keramik' will show that much is still admittedly uncertain, and that many confident assertions lack the proofs which alone justify such confidence.

Let me take two or three examples which concern some of the most important varieties of Samian. Mr. R. A. Smith says (*Proceedings*, xxii. 412) that the 29 type of bowl was in use between A. D. 20 and 70, and the 30 type between A. D. 50 and 100, or, in one variety, 120. In giving these dates, he is of course following others; I mention his paper because he wrote in our *Proceedings* and the others did not. But the end of type 29 cannot be put so early as 70. It appears at military sites in the far north of Britain, Corbridge, Cappuck, Newstead, Camelon, Inchtuthill (this last north of Perth), and at Newstead it appears in very large quantities. These sites can hardly have been reached by Romans till Agricola's campaigns, that is, till nearly A. D. 85; on the other hand, they lie on the line which Agricola very probably followed when invading Caledonia, and Inchtuthill, which was held only for a very brief period, has perhaps the best claim of any spot yet suggested to be in the country of Mons Graupius. It seems to follow that type 29 was in use as late as A. D. 85. It has been urged, indeed, that in the far north of Britain obsolete types of pottery might have lingered on after they had elsewhere vanished. That might be true if in Agricola's day Samian ware had been made, or had even been purchasable, in the vicinity of

Newstead or Camelon or Inchtuthill, and if we were dealing with a civil site. But that was plainly not the case. Moreover, the Roman advance to these northern spots was sudden, and it was military. The Samian found in them must have been brought by the troops from the centre or south of Britain, and must represent, therefore, the ware in use in Britain shortly after A.D. 80. It is, of course, quite possible that the crockery which Agricola's columns took with them to the north may have been manufactured some time before and may have been lying in store in south Britain. But that applies equally to the Samian found (for example) along the German frontier, and is in each case immaterial. We are concerned here not with the date of making but the dates of use, and I think it is plain that 29 must have been in use, and in common use, for fifteen years after A.D. 70.

Similarly with respect to type 30. This did not vanish as early as 100 or even 120, though I once committed myself to nearly that view. It occurs both in England and in Germany on sites which must have been first occupied about A.D. 120, and it seems to have lingered on, scarcely perhaps in very common use, till near the middle of the second century. Again, 'incised' Samian has been dated as appearing first after A.D. 200. But specimens of it occur in Roman forts in Scotland which were abandoned in or about A.D. 180, if not earlier; and it must have begun to appear somewhere about A.D. 170. I might add other instances. These will suffice, I hope, to show that our current dates for Samian are by no means so definitely established as is sometimes assumed. Possibly it might be well in museums and descriptions to avoid, for the present, dates in precise figures. Certainly it is necessary to use all caution in distinguishing facts from both the probable and the improbable.

Finally, I wish to add one word on the name which I have used to describe the wares with which I have been dealing. I have called them 'Samian', and I propose to go on doing so, just as I propose to go on calling china china. I know no other word which denotes them in all their varieties both clearly or precisely. We might indeed borrow the continental phrase *Terra Sigillata*, but that is cumbersome (unless abbreviated to *Sigillata*) and to many persons puzzling. Other alternatives have been suggested. Some English writers use the expression 'Gaulish'. That is an excellent phrase to denote wares which we know for sure to have come from a Gaulish factory, but it becomes wholly inaccurate so soon as it is extended to anything else. It must be remembered that there is a great quantity of Samian which in the present state of our knowledge cannot be safely assigned to its true factory. There is a great deal, too, which being known to us only through imperfect descriptions in books, will never be so assignable. Thirdly, there

is a great deal which was not made in Gaul. So that, although Gaul was a leading centre of Samian manufacture during the Roman Empire, Gaulish is not a good equivalent to Samian. Another suggestion is 'Red Ware'. This again is open to criticism. As a foreign writer has observed, it includes too much, for there are all sorts of red wares besides those styled Samian, and it also conflicts with the actual colours. Samian is of many shades: some pieces, so far from being red, are of a light orange colour; others are dull pink, and so forth, and these variations of colour are often highly significant. In describing a ware which ranges over so many shades, we need to keep red for what is really red. On the other hand 'Samian' is familiar: it has been in use for centuries: its denotation is well understood: it misleads no one. I see that people denounce it as old-fashioned and unscientific. It appears to me to possess exactly the qualities which a good scientific term ought to possess and which numbers of accepted scientific terms actually do possess."

Mr. R. H. FORSTER was at Corbridge when the pottery shop was dug out, but had no opportunity of watching it carefully. The level at which the layer of debris was found would argue a fairly late date, the latest possible being about A.D. 350. The character of the masonry was not a real criterion, as there was earlier work of the same kind, and such was intended to have a covering of plaster; and the piece of walling referred to may not have belonged to the shop at all, but to a street boundary at some period after the fire. Open-air workshops with such boundaries had been found. The problem was to decide how long pottery remained in use in out-of-the-way places like Corbridge after the types had ceased to be manufactured. Old stock would be hawked about from place to place, and might not find a purchaser for some years.

Mr. WALTERS considered the paper more destructive than constructive, but was glad to hear more about the pottery store. To the term "Samian ware" he preferred "Gaulish red ware", but would not apply it to pottery of German manufacture. It seemed quite possible that red ware reached Scotland and remained in use there some years after it had passed out of fashion further south.

Mr. REGINALD SMITH had been misled by the original account of the wares found in the ruined store, and was glad to know that figured red ware was, after all, conspicuously absent. The red ware thus agreed with the Pudding-pan Rock series, the forms and some of the stamps being identical. The second-century coins found sunk in the clay floor were better evidence of date than those scattered over the area among the potsherds.

Mr. HORE suggested "red-glazed ware" as a name for this pottery, which was the only glazed ware in use to any extent in this country during the Roman period; and this term had no misleading associations.

Prof. HAVERFIELD replied that "red-glazed ware" was too cumbersome a term, while "red ware" included too much, and might exclude the dull red or orange-coloured wares made in the same factories as the normal "Samian".

The PRESIDENT thought that "Samian" was as good a term as "china" at the present day, since no one imagined that all red ware was made in Samos or all porcelain in the Far East. In default of the old-fashioned name, there seemed no way of including all shades of colour and all fabrics of this particular glazed earthenware. He thought that the tile-inscription had been produced with an engraved roller of wood, and was what might have been expected of an illiterate Briton.

C. J. PRAETORIUS, Esq., F.S.A., read the following paper on the excavation of a Roman building near Pulborough, Sussex:

"'Borough,' the property of Mr. Hugh Davis Colley, F.R.C.S., is situated on a hill 306 feet in height, overlooking the Weald, three-quarters of a mile from the Stane Street and about $2\frac{1}{2}$ miles from Pulborough. In a meadow on this property there are remains of a Romano-British house, the partial excavation of which I now have the honour of reporting to the Society, the Council having made a grant towards the expenses, which were otherwise borne by Miss E. Davis Colley and Mr. Hugh Davis Colley. Four labourers accustomed to trenching and familiar with the soil were engaged, and the ground was examined until undisturbed earth was reached.

It is stated in Horsfield's *History of Sussex* that 'north-east of the village, on the brow of the hill overlooking the Weald, is a farm called Borough, where are very extensive remains of a Roman building. In the year 1817 the foundations of a quadrangle, 150 by 196 feet, were discovered. It was surrounded by a series of small rooms from 12 to 16 feet square; the walls withinside had been straw coloured, and fragments of large tiles and many tesserae were found.'

During the planting of a new garden hedge at Borough in 1907, walls were found about two feet from the surface, and two running parallel, 12 feet apart, were excavated (fig. 1). The outer wall was uncovered for a distance of 138 feet, and the inner for 85 feet. These walls continue under what is now garden, and are joined by a short wall at the western end, forming what looks

like a corridor. The inner wall was followed until it reached the hedge, where two pegs were driven in to indicate the position, and the ground reopened with the following results.

Some 18 inches from the surface and the pegs the wall was again found and followed. It was soon seen to be curved; 9 feet from the starting-point on the outside of the curve was a roughly built buttress 50 inches long with a width of 35 inches, composed of large untrimmed stones set in pink mortar. The wall continued curved for 29 feet, forming a quadrant, and then joined a straight wall, which was uncovered for a distance of 102 feet. This long wall was joined by another at the point marked A in the plan.

The latter wall, of indefinite length but uncovered for 154 feet, is neatly built, and has gaps at intervals which have not the ragged look of plough-fractures as found in other walls. Near the first break there was a block of stonework, some 2 feet square, the inner side trimmed to a curved surface; and in the trench was found a piece of convex wall-plaster with distemper of a pale green colour, in excellent preservation.

To make sure there was no wall junction at this point, a trench 5 feet deep was cut in an oblique direction, and brought to light some objects to be described later, but no evidence of further walling was discovered in this vicinity.

Some 86 feet in a southerly direction a small room, measuring inside 10 ft. 5 in. by 11 ft. 4 in., was uncovered. Fourteen inches below the present top of the wall and 5 in. from its eastern face was found a large red floor-tile, 19 in. by 15 in., suggesting the base tile of a hypocaust pillar, but no other remains could be found to support this theory. The south wall of the room extends eastward for an unknown distance, and a bronze coin in very bad condition was found at a point where the digging ceased. The east wall continued northwards parallel to the supposed outer wall, 71½ feet being uncovered altogether. The stonework had disappeared, and there only remained some large lumps of chalk upon which the stonework had rested. At the northern end a wall 14 feet in length ran at a right angle to join another wall 57 feet in length and parallel to those on the west; and from this line eastwards a number of small rooms was discovered.

When digging out these three long parallel walls no trace of pavements was found, though roof-tiles and wall-plaster were abundant, and a few small fragments of blue-grey pottery were found.

It is unnecessary to give the precise dimensions of the suite of small rooms, as they can be estimated from the plan. The walls were of uniform width and composition, with two exceptions: one portion, 33 feet in length, had a width of 4 ft. 6 in., and the south wall was at one end of greater width and strength. From

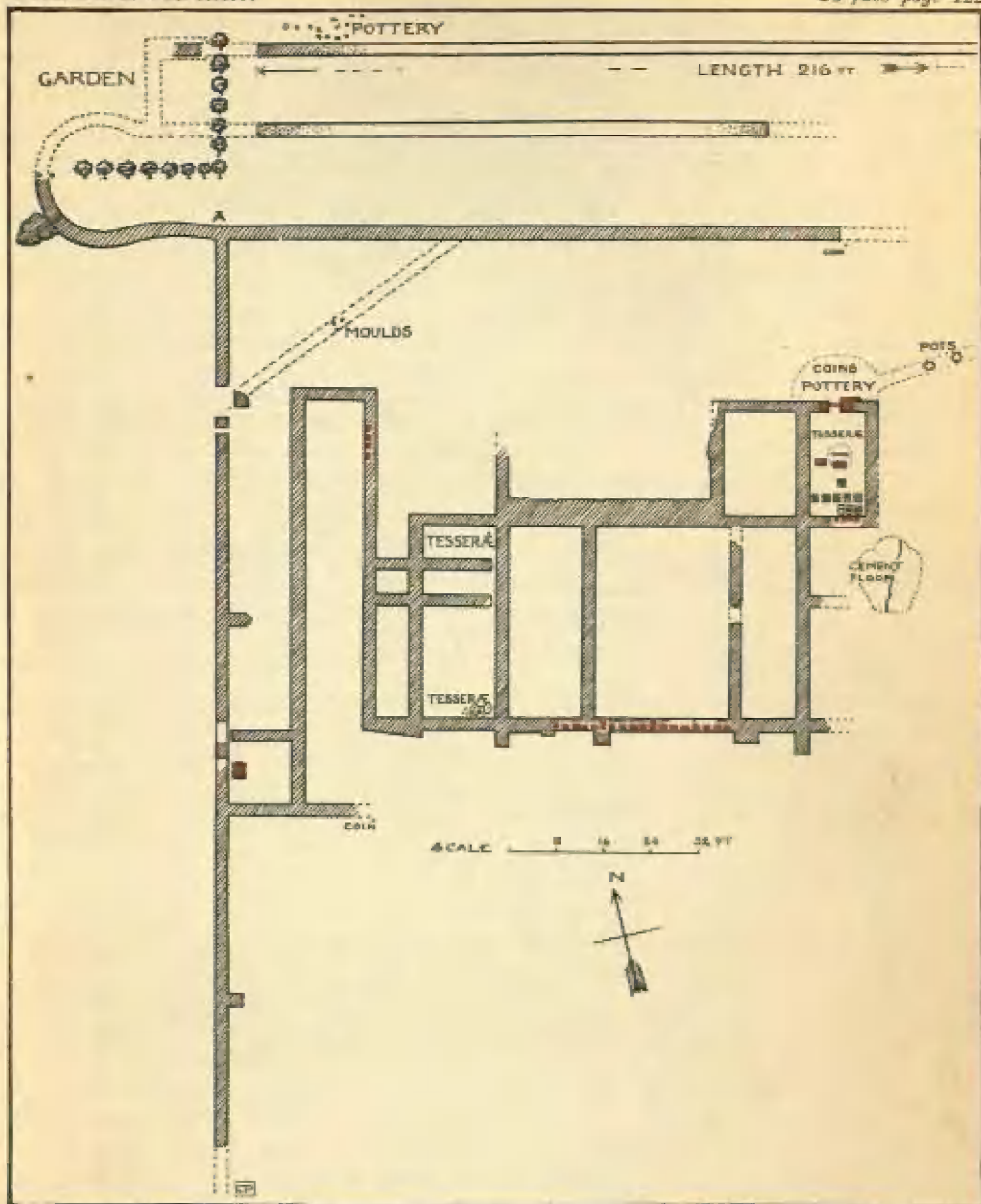


Fig. 1. PLAN OF A ROMAN BUILDING AT PULBOROUGH, SUSSEX, EXCAVATED IN 1909



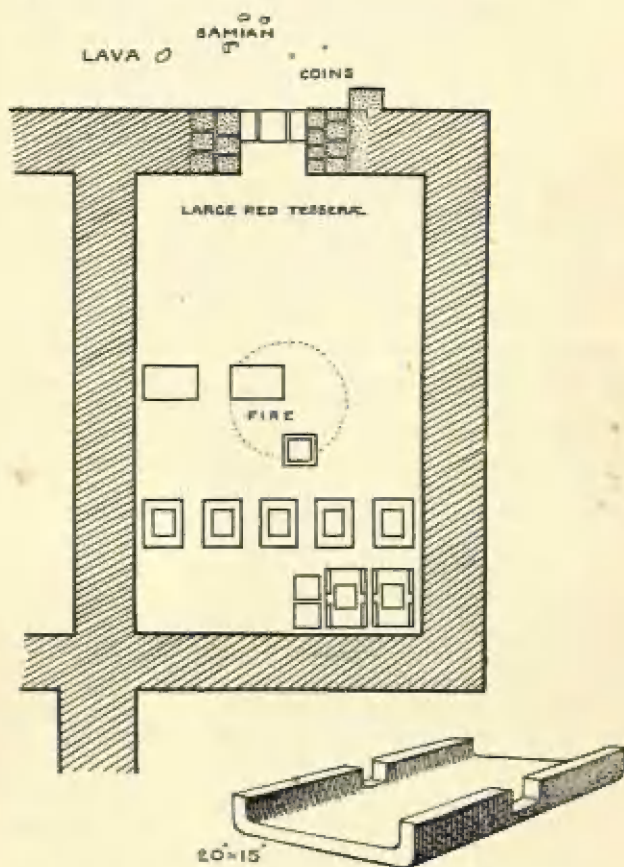
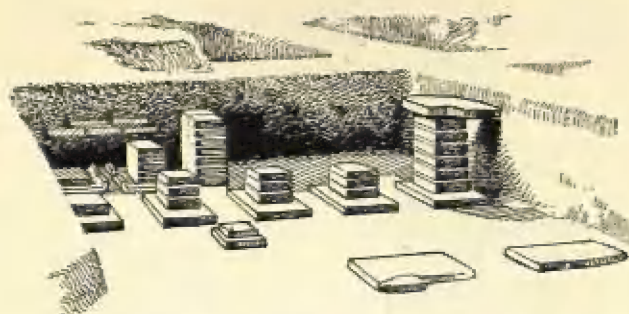


Fig. 2. VIEW AND PLAN OF HYPOCAUST, WITH SPECIMEN TILE.

the first buttress, for a distance of 36 feet, two courses of large red tiles were built in the wall, possibly to support a heavy horizontal beam.

In the interior of a small chamber, the second from the west of this range, a great quantity of floor-tesserae were found scattered through the soil, probably disturbed by the plough, and comprising some two or three thousand small cubes of chalk and a smaller number of cubes made of sandstone and red tile. They were all upside down, in clusters of one colour, and indicated nothing but straight bands of red, black, or brown, forming a coloured frame to a panel of white. Next to the room in which the tesserae were found ran a passage 4 feet wide, and just beyond the wall at its south end were a few smaller tesserae under three large stones, no doubt indicating a room. Leaving these small rooms, where little of importance was noted beyond the dimensions and ground-plan, the excavators came on a small hypocaust chamber, in and near which a number of small objects was found.

The room (fig. 2) measured inside 12 ft. 8 in. by 9 ft. 1 in., and contained at the south end eight piles in their original position, on the top of one being a large floor-tile almost horizontal. In the north wall was a well-built stoke-hole, the sides being composed of red tiles, with a small paved hearth between, on a level with the thick cement floor on which the piles rested. The five piles in a row were fairly complete, and consisted of tiles of the size commonly found in Roman houses in Britain.

The three piles immediately south of this row and in the corner of the room were different, two of the bases being made of the same red terra-cotta, of which tiles and bricks are still made in the neighbourhood. Two measured 20 in. by 15 in., and had notches in the middle of each flange, which is not usually the case (fig. 2). Next to these stood a double pile consisting of two heaps of red tiles $8\frac{1}{2}$ in. by $8\frac{1}{2}$ in., packed together with cement. The highest pile, on which rested a paving-flag, contained nine small tiles with a larger one for the base. In the middle of the room three red tiles were found irregularly placed, but in true horizontal position. This part of the room had been disturbed at some time after the upper floor of the hypocaust had been removed, for on the lower floor, between the piles, remains of a fire were found, 3 feet in diameter. The soil removed was of dark colour, and on the floor was a layer of charcoal, in which were many large iron nails, probably from roof-timbers used for burning; also a number of iron studs set closely together in groups of six or more, in a perished condition, evidently the hob-nails of one or more sandals. Thin buff pottery fragments and many small animal bones were found at

this point, and suggested an encampment here after the house was deserted and in a state of ruin.

At the northern end of this room there was a quantity of large red-tile tesserae, which may have belonged to the upper pavement supported on the piles (the *suspensura*).

An old quarry only a few hundred yards distant may have supplied the stone used in this building, and about the same distance off are two copious perennial springs that could have been utilized. The mortar was of the two kinds usually found on Roman sites: the hard quality consisting of pounded tile, washed pebbles, sand, and lime; and the other of sand and lime only, its pinkish colour being due to the admixture of red Pulborough sand.

The long walls are in very good condition and evenly built, the outer face of the stones being trimmed. One length of 60 feet had no single stone missing or out of place, but there was nothing to indicate how the superstructure was attached to the masonry or of what it consisted.

With a view to tracing the furnace of the hypocaust the entrance was dug through, and a great quantity of earth removed to some depth, but no trace of fire or wood-ash was noticed. In this mass of earth several small objects occurred, among them the following coins:

Triens in very bad condition.

Sestertius or first brass of Claudius (A.D. 41-54).

Second brass of Nero (A.D. 54-68).

Second brass of Domitian (A.D. 81-96).

First brass of Hadrian (A.D. 117-138).

There were also a bronze brooch of first-century type (fig. 3), a bone pin, a large quantity of bluish-grey pottery fragments, and a small thumb-pot. Of more importance were portions of a Samian *mortarium*, of which enough remains to furnish an elevation and section (fig. 4). While the brooch is of a provincial Roman type that has been assigned to the reign of Tiberius (A.D. 14-37),¹ the *mortarium* seems to date from a time when moulded figure decoration had given place to slip decoration (barbotine), the latter being assigned to the early part of the third century. This particular form of vessel with overhanging lip, grit-within, and grooved body, was largely made in Germany,² and the conventional leaf patterns (stem with pairs of volutes, alternating with oak-leaf) must be regarded as degenerate descendants of the

¹ *Bonner Jahrbücher*, lxxxvi, plate iv, fig. 20, 170, 220.

² Ludowici, *Urnengrüher römischer Töpfer in Rheinzabern*, 274; and his *Stempelbilder römischer Töpfer*, 252.

graceful floral scrolls on first and second century specimens of this red ware.

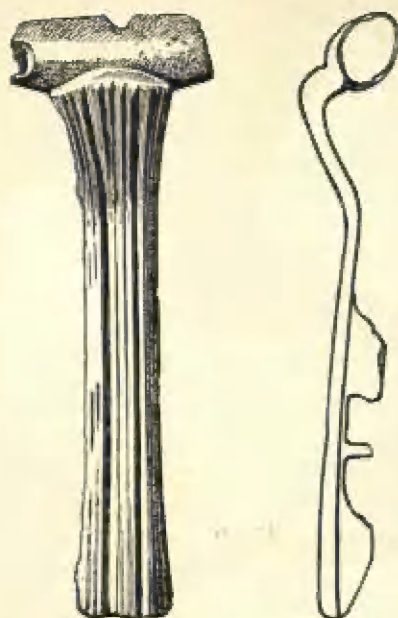


Fig. 3. BRONZE BROOCH, FRONT AND SIDE VIEWS ($\frac{1}{2}$).

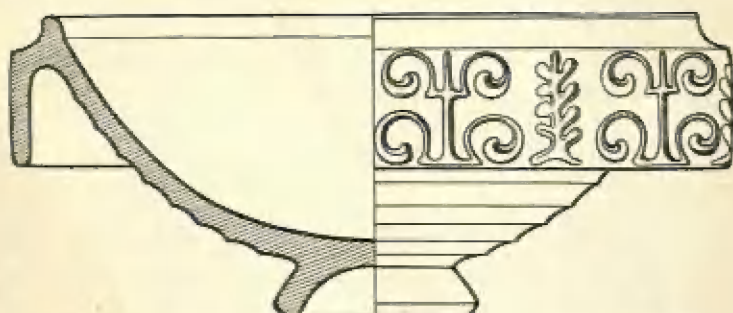


Fig. 4. RED-WARE MORTARIUM (ELEVATION AND SECTION, RESTORED) ($\frac{1}{2}$).

Vessels resembling fig. 4, but with the collar undecorated, have been found in London, and form part of the Roach Smith collection in the British Museum, which also contains portions of vessels of the same general form and with the same grooved



Fig. 5. FRAGMENTS OF MOULDS FOR RED WARE, WITH CASTS (1)

body, but with no grit within and a flanged lip, the whole somewhat resembling no. 47 of Dragendorff's series. Fragments of such a vessel were also found during the excavations at Borough, and probably came from the same factory.

A trial trench (dotted on plan) was made at an angle from the corner of this room, but no other walls were found, and but few fragments of pottery. In the same line, about 4 feet from the surface in sandy soil, two nearly perfect urns of hard grey ware were discovered: one wide at the mouth, and the other with burnished lines and two grooves on the shoulder. Such urns were frequently used as cineraries, but there were no traces of a cremation in this case.

From a break in the supposed outer wall where the convex wall-plaster was found, a deep trench was cut in an oblique north-easterly direction, and brought to light an interesting little bronze model of an adze-hammer, 1.6 in. long, with circular hole for the handle. Quantities of roof-tiles and wall-plaster were noticed, also a seam of oyster-shells, but little pottery was found till the middle was reached. Here were small fragments of grey pottery and one piece of Samian, exceptionally thin, with the figure of a panther. Though poorly represented, this type can be recognized as of Lezoux origin,¹ but was possibly moulded in this country. Most important of all were three fragments of different pottery moulds for making Samian bowls of type 37 (Drag.). They were found about 5 feet from the surface and much below the level of the walls. The accompanying full-sized photographs (fig. 5) of the moulds and plaster casts from them will render a minute description unnecessary, though the specimens are of extreme rarity and interest. There is part of a mould for making red-ware bowls of type 37 (Drag.) in York Museum, which was found in that city, also a stamp in the Guildhall Museum that is said to have been found in London and bears the name of the potter CERIALIS. Besides these indications of a local manufacture of red ware, there is a large fragment² of a free-style 37 bowl found at Aldgate, London, which is evidently a waster and probably not imported; and the present discovery lends colour to the view that foreign moulds were used or imitated in this country for the production of red ware. There are several fragments from Pulborough of a hard thin ware of orange-red colour, both figured (panther) and plain, some having been warped in the kiln; and the conclusion seems inevitable that an attempt was made to produce *terra sigillata* on the spot, though the moulds are of the same material

¹ Déchelette, *Vases ornés de la Gaule romaine*, ii. 124, no. 798.

² Walters, *Cat. of Roman Pottery* (Brit. Mus.), no. M1546. fig. 215; for the evidence of moulds see p. xxvi, note 2.

as those found at Lezoux (reddish-buff clay), and probably came from that centre.

The first (fig. 5, top) shows the usual egg-and-tongue moulding round the lip of a 37 bowl, between wavy lines, with a human head and shoulder below and a rosette in the field; the second (middle) shows part of a dancing-girl with ends of drapery in her hands, evidently a reproduction of type 217 in Déchelette (vol. ii, p. 43, Lezoux); and the bottom figure represents Athena standing, in long chiton and *peplos*, with aegis and oval shield, a two-handled cup below right hand (?), and palm-leaves and deer (?) in the field.

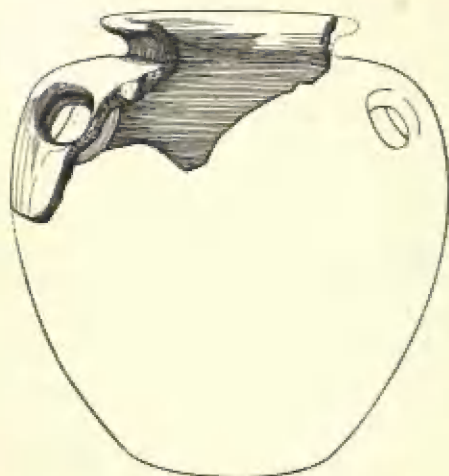


Fig. 6. FRAGMENT OF BRITISH URN (WITH RESTORATION) ($\frac{1}{8}$).

Apart from much charcoal, slag, and burnt stones, a few pieces of unburnt coal were found, at such a depth that the Romans might be supposed to have recognized its value as fuel as they certainly did in the North.¹ Several pieces of red mortar had been accidentally covered with a greenish vitreous deposit, the origin of which is doubtful. The following colours were well preserved on fragments of wall-plaster: blue, red, yellow, cream, and turquoise blue; and in several cases the design was of a floral character, while other pieces were painted or splashed to imitate marble, or had panels with coloured borders. Nails and a few iron fragments of unknown use were found, as well as teeth and bones of the horse and other animals, tusks of the boar, and tines of deer antler.

¹ J. Collingwood Bruce, *The Roman Wall* (1851), 441.

During the excavations fragments of glass jars and window-glass were found, some bowls being remarkably thin; and another specimen of the same material was a small draughtsman or counter.

Other specimens worthy of mention from the site, the exact localities being of no special interest, are fragments of Lezoux ware, plain and thick as frequently about the middle of the second century; thumb-pots of buff ware with bands of red or black paint; coarse grey slabs of pottery with indentations on the inner faces made with the finger; two fragments of New Forest ware, with the typical hard paste and metallic lustre; red ware with a hatched band; yellow ware with slip scroll and varnish almost metallic in appearance; black ware with burnished lattice-pattern and combed design, one plain piece incised with what looks like a Greek ϕ ; part of an ornamental wall-tile; a spindle whorl of grey pottery; and lastly, part of a large urn (fig. 6) with one of two countersunk handles of a type familiar from Dorset, but of British rather than Romano-British origin.¹

Prof. HAVERFIELD said the double-axe type of silver ingot was well known, and dated from late imperial times, but the specimen reported from Sussex was, in his opinion, an inferior copy of one found at the Tower of London, with alterations to give an air of authenticity. The discovery of moulds for Samian ware in the Pulborough villa was of special interest as indicating some attempt to manufacture the ware in this country.

Prof. GOWLAND had examined several Roman ingots from Britain and the Continent, and quite concurred in the opinion expressed as to the Sussex specimen. Both the shape and the lettering betrayed its origin. The two lumps described as pigment were nothing but indurated tuff.

Thanks were ordered to be returned for these communications.

¹ *Early Iron Age Guide* (British Museum), 141, fig. 135.

THURSDAY, 17th MARCH, 1910.

CHARLES HERCULES READ, Esq., LL.D., President,
in the Chair.

The following gifts were announced, and thanks for the same ordered to be returned to the donors :

From the Library of the Royal University of Upsala :

The publications of the following Societies :

Upland.—Upplands Fornminnesförenings Tidskrift I-XV, XVII-XXV.
East Gothland.—Meddelanden från Östergötlands Fornminnesförening, 1903-7.

Fornminnesförenings Tidskrift I.

West Gothland.—Vestergötlands Fornminnesförenings Tidskrift, IV-XX.

Skara Stifts Kyrkliga Jordebok af år 1540.

Sudermannland.—Bidrag till Södermanlands äldre Kulturhistoria, I-XIV.

From the Author :—Bishop Pursglove of Tideswell. By Rev. J. M. J. Fletcher, M.A. 8vo. n.p. 1910.

Edward Philip Monekton, Esq., M.A., was admitted Fellow.

The TREASURER read a paper, illustrated by lantern-slides, by Mr. George Jeffery, Curator of Ancient Monuments in Cyprus, which had for its chief subjects the present condition and presumable future of these most interesting remains. After reference to prehistoric and classic tombs, and to ancient sites generally, an account was given of Byzantine churches and monasteries in the island, which are less known than they deserve. The Gothic architecture developed during the long sway of the Lusignans was the next subject, Mr. Jeffery's account being supplementary to what has been said by M. Camille Enlart in his great work, *L'Art gothique en Chypre*. Reference was also made to the Venetian fortresses and civic architecture, and to native art during the Venetian and Turkish occupations.

Mr. Jeffery then referred to the deplorable destruction of ancient village churches all over the island, a destruction which has taken place especially during the past thirty years of the British occupation. In almost every case the old church has been pulled down merely on account of its antiquity, that is to say, not because it was ruinous or decayed, but because it was not in the approved style of the present day. It seems that the great social and commercial changes of the last few years have brought about a strange ambition in the minds of the village communities, which takes the form of rebuilding these churches, one village

against another. Mr. Jeffery discussed the best means of counter-acting the unfortunate native sentiment, and added that as so many of these village churches of Cyprus have been replaced by modern barnlike buildings, it is all the more incumbent on us to save, if possible, those that remain. He himself has secured from further attack almost all the ancient church ruins within the walls of Famagusta, and has obtained the registration, as "ancient monuments", of most of the Government properties having just claims to antiquity.

Mr. DALTON showed on the screen several photographs taken by himself of the early churches of Famagusta and the Venetian fortifications, through which the contractors for the harbour works cut only two arches, instead of demolishing the whole front of the curtain wall as was at first intended.

Dr. EVANS had expected to hear suggestions with a view to modifying the law relating to antiquities in Cyprus. It was an extraordinary thing that the Greeks, who were absolutely disloyal to the British government of the island, had, by dint of bargaining, got possession of the antiquities and misused their opportunities in the way described. In spite of this, it was a great advantage to have an inspector of ancient monuments. In Crete the Greeks had some respect for classical antiquities, but were absolute barbarians in regard to mediæval remains and anything Latin. Their orthodox fanaticism exceeded that of the Moslems, among whom there was a powerful sect almost Christian in its ideas. The orthodox Greek cared for nothing but orthodoxy, though at Athens there was a more cultivated atmosphere, which he hoped might some day spread to Cyprus.

Mr. ARTHUR SMITH referred to excavations in the island by the Cyprus Excavation Fund and the Hellenic Society, which had fairly laid down the lines of Cypriote archaeology. The operations at Salamis were highly successful, and it was surprising to find that the proceeds of these diggings might be seen in London, New York, and Berlin. Under the antiquities law the Government took a third share and got a great deal from Enkomi; but he believed that the cases had not been unpacked at Nicosia, and local rumour belittled the amount there while exaggerating the British Museum's share. The result was a national movement which put a stop by law to all excavations whatever. Cyprus was not like Greece or Crete, where great historic sites were to be explored, but yielded mainly grave-furniture, which is now the prey of the illicit digger.

Mr. W. H. Fox stated that a church-screen from Cyprus might be seen in a drawing-room in South London, and relics of that kind might still be obtained by interested parties. Estates might be procured in the island at exceptionally low rates.

Mr. GOMME would rejoice to see action taken by the Government, but called to mind the official attitude in the matter of Crosby Hall, and mentioned that there were two bills now before Parliament for the possible destruction of a church in Piccadilly and the Duke of York's School at Chelsea. Further, there was a proposal to transport an inn at Banbury bodily to America.

Mr. CRACE inquired under what legislation were directions given to destroy or preserve buildings in Cyprus. Was the present state of things the outcome of Turkish or local law?

The PRESIDENT remarked that in Cyprus Turkish law was administered by British officials, and the distribution of objects found was in accordance with that law, equal shares going to the owner, the state, and the finder. This was a most mischievous piece of legislation, which was only a few years old but had already had a most disastrous effect. Its object was to keep antiquities in Cyprus, which might be proper from a parochial point of view but had a very different result. Any museum or private collector outside British territory might keep such antiquities without any protest being raised, and finds were continually smuggled out of the island. Such anomalies were inseparable from parochial legislation, and the present regulations were certain to fail as being contrary to common sense.

Thanks were ordered to be returned to Mr. Jeffery for his communication, which will be printed in *Archæologia*.

THURSDAY, 7th APRIL, 1910.

CHARLES H. READ, Esq., LL.D., President, in the Chair.

The following gifts were announced, and thanks for the same ordered to be returned to the donors :

From the Author :—The Royal Society, or science in the State and in the Schools. By Sir William Huggins, K.C.B., O.M. 8vo. London, 1906.

From the Author :—The East London pulpit cross of olden days (1398-1680). By Rev. E. C. Carter. 8vo. London, n. d.

From Ernest C. Shearman, Esq., A.R.I.B.A. :—Photographs of five drawings of the tomb of Aymer de Valence in Westminster Abbey.

The following were admitted Fellows :

George Francis Legge, Esq.

Hon. John Fortescue.

Hon. Sir Schomberg Kerr McDonnell, K.C.B.

Rev. Charles Wilmer Foster, M.A., Canon of Lincoln.

Edwin Landseer Lutyens, Esq.

The PRESIDENT referred to the appointment of Mr. Peers as Inspector of Ancient Monuments, the public announcement of which had been made since the last meeting of the Society.

The President referred to the keen interest that the Society had consistently taken in the proper execution of the duties of this office, and stated that during the past six or seven years he had had numerous conversations with the officers of the Government under whom the office existed and had invariably found these gentlemen most anxious to meet the wishes of the Society. He was sure the meeting would endorse his view that by the appointment of Mr. Peers a most satisfactory solution had been found, and while the Society had every reason to be pleased, he thought the Government were also to be congratulated.

Notice was given that the Annual Meeting for the election of the President, Council, and Officers of the Society would be held on Saturday, 23rd April, being St. George's Day, at 2 p.m.

The Report of the Auditors was read, and thanks were ordered to be returned to the Auditors for their trouble and to the Treasurer for his good and faithful services.

SOCIETY OF ANTIQUARIES OF LONDON.

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDING 31st DECEMBER, 1909.

INCOME.			EXPENDITURE.		
	£	s. d.		£	s. d.
Subscriptions received	1839	1 6	Publications of the Society :		
" unpaid, 1st December, 1909	43	1 0	Printers' and Artists' Charges and Binding	92	18 11
	1882	2 6	Library : Binding	69	18 0
Less Subscriptions unpaid	6	6 0	Card Catalogue	8	0 0
Admissions			Card Index	155	7 2
Composition			Books purchased	53	0 0
Dividends :			Subscriptions to Books and Societies,		
£10583 10s. 7d. Metropolitan 3 per cent. Stock	290	13 3	Research Fund : Proportion of Admission Fees		
£1010 1s. 6d. Metropolitan Water Board 3 per cent. " B" Stock	28	13 8	House Expenditure : Insurance	41	8 0
Works sold	328	6 11	Lighting	108	12 4
Stevenson Bequest :	181	18 0	Fuel	30	12 0
Dividend on Bank Stock and other Investments	618	6 4	Repairs	166	12 7
Sundry Receipts	73	7 9	Tea at Meetings	20	10 10
Balance carried to Balance Sheet	50	18 9	Cleaning and Sundries	31	16 6
			Income Tax and Inland Revenue Licence		
			Legacy Duty and Costs : Stevenson Bequest	29	6 0
			E. C. Ireland : Retiring Allowance	30	10 0
			Special Allowance		
			Salaries, &c. : Secretary, Allowance	50	0 0
			Assistant Secretary	400	0 0
			Clerk	250	0 0
			Wages and Allowances :		
			Porter, Housemaid, and Hall Boy		
			Official Expenditure :		
			Stationery and Printing	119	10 2
			Postage	12	17 3
			" and Carriage on Publications	55	3 11
			Sundry Expenses :		
			Excavations, London Wall	£100	0 0
			Christ's Hospital site	163	12 8
			Sundries	263	12 8
				451	4 0
				£3435	14 3

[illegible]

We have prepared the above Balance Sheet and Income and Expenditure Account from the Books and Statements provided by the Treasurer of the Society, and certify to the accuracy of the same. The Investments, which have been, as before, taken at Stock Exchange List prices, on the 30th December, 1899, with the exception of the Metropolitan Water Board 3 per cent. "B" Stock, which was purchased in 1905, and is at cost price, do not include those belonging to the Research and Owen Funds. No account has been taken of the Books, Furniture, Antiquities, or other Assets of the Society.

Wallbrook, London, E.C.
21st March, 1910.

C. F. KEMP, SONS, & CO.

We, the AUDITORS appointed to audit the ACCOUNTS of the SOCIETY to the 31st day of December, 1909, having examined the find the same to be accurate.

CASH ACCOUNT FOR THE YEAR

		RECEIPTS.			
1909.				£ s. d.	
Balance in hand, 31st December, 1908				193 14 7	
Annual Subscriptions :					
7	at £3 3s., arrears due 1908			22	1 0
2	at £2 2s., ditto			4	4 0
531	at £3 3s., due 1st January, 1909			1672	13 0
77	at £2 2s., ditto			161	14 0
1	at £1 11s. 6d.			1	11 6
2	at £3 3s., paid in advance for 1910			6	6 0
1	at £2 2s., ditto			2	2 0
				1870 11 6	
Admissions :					
10	Fellows at £8 8s.			84	0 0
16	Fellows at £10 10s.			168	0 0
				252 0 0	
Composition :					
1	Fellow at £55 0 0				55 0 0
Dividends :					
on £10583 19s. 7d. Metropolitan 3 per cent. Stock				299	13 3
on £1010 1s. Metropolitan Water Board 3 per cent. "B" Stock				28	13 8
				328 6 11	
Works sold.				31 4 3	
Stevenson Bequest :					
Dividend on Bank Stock and other Investments				618 6 4	
Owen Fund :					
Dividend on £300 2½ per cent. Annuities.				7 2 0	
Sundry Receipts				63 12 3	

£3419 17 10

OF ANTIQUARIES OF LONDON, from the 1st day of January, 1909,
underwritten ACCOUNTS with the Vouchers relating thereto, do

ENDING 31ST DECEMBER, 1909.

		PAYMENTS.			
1909.		£	s. d.	£	s. d.
Publications of the Society :					
	Printers' and Artists' Charges and Binding			1061	1 8
Library :					
	Binding	92	18 11		
	Card Catalogue	69	18 0		
	Card Index	8	0 0		
	Books purchased	156	17 2		
	Subscriptions to Books and Societies	53	0 0		
				380	14 1
Research Fund :					
	Proportion of Admission Fees			33	12 0
House Expenditure :					
	Insurance	41	8 9		
	Lighting	105	1 10		
	Fuel	19	2 6		
	Repairs	176	0 8		
	Tea at Meetings	21	17 4		
	Cleaning and Sundries	35	16 0		
				399	13 1
	Income Tax and Inland Revenue Licence			19	2 6
	Legacy Duty and Costs : Stevenson Bequest			13	14 8
E. C. Ireland :					
	Retiring Allowance	29	6 0		
	Special Allowance	30	10 0		
				59	16 0
Salaries, &c. :					
	Secretary, Allowance	50	0 0		
	Assistant Secretary	400	0 0		
	Clerk	250	0 0		
				700	0 0
Wages and Allowances :					
	Porter, Housemaid, and Hall Boy			194	16 6
Official Expenditure :					
	Stationery and Printing	125	17 2		
	Postage	12	17 3		
	Ditto and Carriage on Publications	60	8 11		
Sundry Expenses :					
	Excavations, London Wall, Christ's				
	Hospital site	£100	0 0		
	Sundries	164	13 8		
				264	13 8
				463	17 0
Cash in hand :					
	Coutts & Co., Current Account	85	6 4		
	Petty Cash	8	4 0		
				93	10 4
				£3419	17 10

RECEIPTS.		RESEARCH FUND	
		£ s. d.	£ s. d.
Balance in hand, 31st December, 1908			66 0 5
General Account :			
Proportion of Admission Fees. 16 Fellows at £2 2s.			33 12 0
Subscriptions			54 16 0
Donations			34 4 0
Dividends :			
12 months' Dividend on :			
£1805 13s. 4d. India 3½ per cent. Stock	59 15 4		
£500 J. Dickinson & Company Ltd. 5 per cent. Preference Stock	23 14 0		
£527 13s. 0d. Victoria Government 3 per cent. Stock	14 19 0		
£613 13s. 3d. Metropolitan Water Board 3 per cent. "B" Stock	17 8 7		
			115 17 5
			£304 9 10

STOCKS AND INVESTMENTS

	Amount of Stock.	Value at 31st December, 1909.
	£ s. d.	£ s. d.
Metropolitan 3 per cent. Stock	10583 19 7	9790 3 7
Bank Stock	2128 9 6	5502 2 2
Great Northern Railway Consolidated 4 per cent. Perpetual Preference Stock	2725 0 0	2970 5 0
London and North Western Railway 4 per cent. Guaranteed Stock	2757 0 0	3060 5 5
North Eas Railway 4 per cent. Guaranteed Stock	2761 0 0	3064 14 2
Midland Railway 2½ per cent. Consolidated Perpetual Preference Stock	592 5 10	410 3 3
Metropolitan Water Board 3 per cent. "B" Stock	1010 1 0	898 18 10
	£22557 15 11	£25696 12 5
OWEN FUND.		
2½ per cent. Annuities	300 0 0	243 15 0
RESEARCH FUND.		
India 3½ per cent. Stock	1805 13 4	1769 11 1
J. Dickinson & Co., Limited, 5 per cent. Preference Stock	500 0 0	500 0 0
Victoria Government 3 per cent. Consolidated Inscribed Stock	527 13 0	448 10 0
Metropolitan Water Board 3 per cent. "B" Stock	613 13 3	546 3 3
	£3445 19 7	£3264 4 4

ACCOUNT.

PAYMENTS.

	£	s.	d.
British School at Rome (Western Mediterranean Research)	5	0	0
Charterhouse-on-Mendip Excavation Fund	5	0	0
Maumbury Rings, Dorchester, Excavation Fund	10	0	0
Roman Building, Pulborough, Excavation Fund	5	0	0
Silchester Excavation Fund	40	0	0
Corbridge Excavation Fund	15	0	0
Caerwent Exploration Fund	15	0	0
Tortington Priory Excavation Fund	10	5	0
Old Sarum Excavation Fund	75	0	0
Red Hills Excavation Fund	10	0	0
Byzantine Research and Publication Fund	8	8	0
Avebury Excavation Fund	25	1	0
Balance, 31st December, 1909	80	15	10

£304 9 10

31st DECEMBER, 1909.

Amount
of Stock.

In the High Court of Justice, Chancery Division

In the suit Thornton v. Stevenson.

The Stocks remaining in Court to the credit of this cause are as follows :

Great Western Railway 5 per cent. Guaranteed Stock	8894	0	0
Midland Railway 2½ per cent. Perpetual Preference Stock	15085	8	4
	£23979	8	4

After payment of the Annuities, now amounting to £400 per annum, the Society is entitled to one-fourth share of the residue of the Income of the above Funds. This is payable after the 10th April and 10th October in every year.

Witness our hands this 21st day of March, 1910.

LELAND L. DUNCAN.
HORACE SANDARS.
P. CARLYON-BRITTON.
AYMER VALLANCE.

R. L. HOBSON, Esq., B.A., read the following note on some mediaeval pottery from Basing House, Hants :

"The history of Basing House and its architectural aspects were laid before this Society by Mr. C. R. Peers on the 18th of March, 1909 ; and it was incidentally mentioned that a quantity of broken pottery had been collected on the site and stored in the Basing House Museum.

Unfortunately, this pottery in its present condition is more eloquent of the destructive powers of Cromwell's soldiers than of anything else, and it can in itself add little to the information which Mr. Peers has already collected. For important as is the evidence which pottery fragments have given from time to time in questions of history and archaeology, it is too often vitiated by the presence of modern crockery which has managed to intrude in a disconcerting and frequently incomprehensible manner.

This was the case with the important eastern sites of Rhages in Persia and Fostat in Egypt, and the same is true in a lesser degree at Basing House, where a number of pieces of nineteenth-century china were found in company with the more legitimate denizens of the site.

The continuous occupation of Basing House from early mediaeval times to the middle of the seventeenth century was demonstrated by Mr. Peers, but the bulk of the pottery belongs to the Great House period beginning about 1530, the approximate date of the building of the house by Sir William Paulet, and ending in 1645, the year of its destruction by Cromwell.

Parts of a green-glazed pitcher, of a fourteenth-century type, and a few paving tiles are the solitary representatives of the pre-sixteenth-century period. These tiles are of the inlaid kind which are commonly misnamed 'encaustic',¹ and include several large quarries with confronted birds or sporting subjects closely analogous to those on the Chapter House pavement at Westminster, which was completed in the middle of the thirteenth century. One of them has the design of a huntsman occupying the middle spaces, four hounds in the borders, and a hare ensconced in each corner.

The rest are smaller in size, with commonplace subjects, and date from the fourteenth to the early sixteenth centuries, the most interesting being those with initials of Sir William Paulet, of which a much larger number are found in the Church at Old Basing.

The pottery of the Great House period is important to the student of the ceramics of the time, and it would be far more so were it not for the modern intruders mentioned above, which

¹ See *Catalogue of the English Pottery in the British Museum*, p. 1.

render inconclusive the inferences we should naturally draw from the finds.

There are, however, certain well-defined types among the Basing House potsherds. The largest group is of foreign origin, and consists of Rhenish stonewares, which are also known as 'Culleyn' or Cologne wares and Grès de Flandres. The principal centres of fabrication for this kind of pottery were Siegburg, Raeren, Cologne, Frechen, and the province of Nassau. Cologne was no doubt also the centre of distribution, and very large consignments of the pots must have been shipped down the Rhine



Fig. 1. FRECHEN "GREYBEARD", DATED 1594. H. $14\frac{1}{2}$ INCHES. BRIT. MUS.

for England during the sixteenth and seventeenth centuries, where their hard, impervious body and clean salt-glaze rendered them far more desirable for drinking or storing liquors than the softer lead- or tin-glazed wares of local make.

The earliest Basing House specimen of this class is a plain jug with crinkled base, a type which belongs to the fifteenth century and the first half of the sixteenth. But the bulk of the fragments are from the familiar Bellarmine or Greybeard jugs, with swelling bodies and tapering necks, on which is applied in relief a bearded mask supposed to have originated in a caricature of the unpopular Cardinal Bellarmine. The bottle forms were for

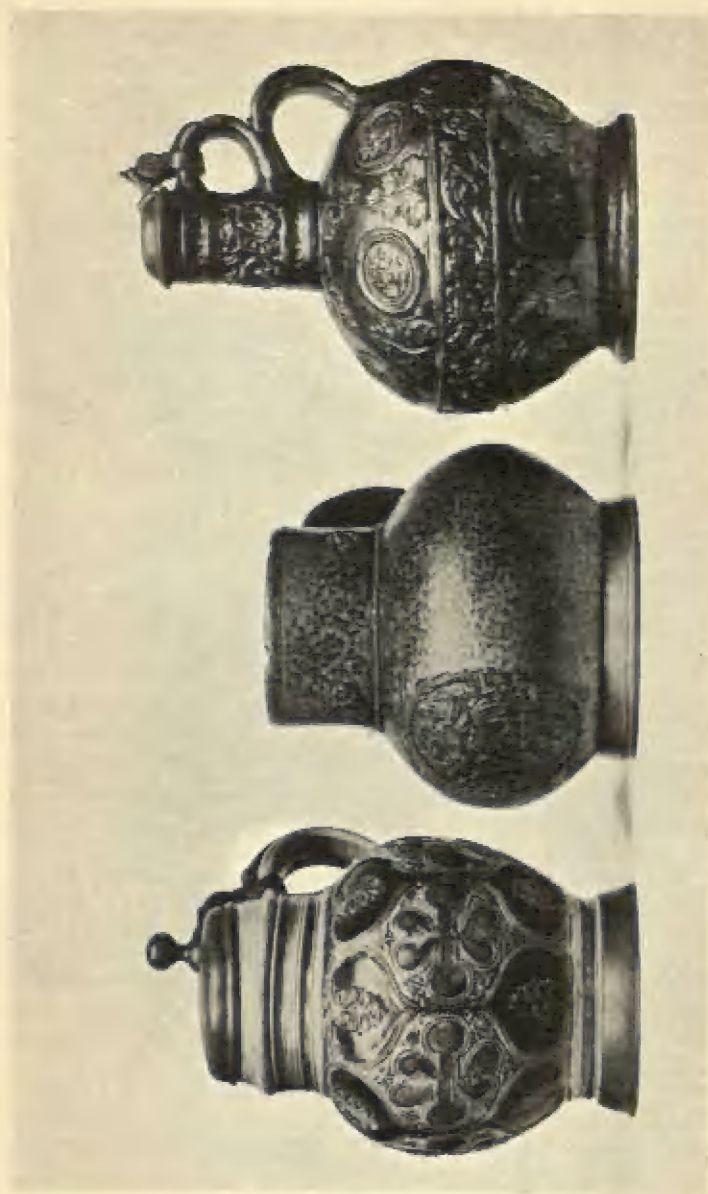


FIG. 2. ENAMELLED NASSAU JUG, SEVENTEENTH CENT.
H. $6\frac{1}{2}$ INCHES.

FIG. 3 (PREFRIS) AND FIG. 4 (VORLESSE). JUG AND JUG.
SIXTEENTH CENT. BRIT. MUS.

storage, but there were others with wide mouth and cylindrical neck, suited for drinking purposes. The latter were usually more richly ornamented, with oak scrolls, small medallions, and inscribed bands in relief. The large, elaborately decorated 'presentation jugs' with figured reliefs after designs by Beham and the *petits maitres* are not represented at Basing House; but there are a few fragments of large jugs with circular and oval armorial medallions which must have resembled fig. 1.

Dated examples of these wares usually fall within the last two decades of the sixteenth century. There are besides a few pieces on which the freckled brown glaze is enriched with the brilliant blue and manganese-purple enamels chiefly found in the Raeren and Nassau pots of the seventeenth century. Figs. 1-4 will serve



Fig. 5. TIN-GLAZED POT FOUND IN LONDON.

Fig. 6. DUTCH OR FLEMISH TILE. LATE SIXTEENTH CENT. BRIT. MUS.

to show the types to which the Basing House fragments belong: figs. 1 and 3 are Frechen wares, fig. 4 Cologne ware, and fig. 2 Nassau ware with blue and purple enamels.

Another large group, foreign also for the greater part, consists of tin-glazed earthenwares generally known as maiolica or delft. The bulk of the fragments of this kind which were found at Basing House is Flemish or Dutch in origin, though some of them may be the work of the Dutch potters who started the delft industry in London in the first half of the seventeenth century, or by the English potters who followed their lead.

The square tiles with tin-glazed surface painted with animal and other subjects in blue, green, and yellow (such as fig. 6) are usually described as Flemish. Many of them, however, must be Dutch, for there were factories at Haarlem and at Delft itself

in the last half of the sixteenth century, where tin-glazed wares with similarly painted designs were made.¹ Akin to these are the albarello-shaped jars, of which several fragments and one perfect specimen were found at Basing House. A similar jar found on the site of an apothecary's room in the Praemonstratensian Abbey at Middelburg is preserved in the Rijks Museum, Amsterdam. The circumstances of its discovery show that this specimen was made before 1570, though similar vessels (see fig. 5) are seen in Dutch pictures of the seventeenth century.²

Among the other tin-glazed wares are specimens of those tiny pots of somewhat similar shape to fig. 5 but less than two inches high and usually undecorated, which are called ointment



Fig. 7. GREEN-GLAZED JUG (H. $4\frac{1}{2}$ INCHES), add

Fig. 8. CUP. SIXTEENTH CENT. BRIT. MUS.

pots; parts of a white dish with elegantly scalloped sides, probably Dutch delft of mid-seventeenth century date; and a fragment of a rare and curious ware with a floral spray in high relief painted in yellow and manganese (fig. 21). This last appears to be part of an Italian maiolica vase, of the early sixteenth century, but like so much of the Basing House pottery it has been discoloured by the fire which gutted the house in 1645.

To pass to the purely English wares, the earliest of the Great House period are those with thin, light-coloured body and a partial covering of mottled green glaze, brilliant and lustrous. This is the typical Tudor ware; and much of it was probably of

¹ See H. Havard, *La Céramique Hollandaise*, ch. iii; and M. A. Pit, *Bulletin uitgegeven door de Nederlandsche Oudheidkundigen*, tom. 1 (1900-1), pp. 68-73.

² E.g. the Alchymist, by Thomas Wijck (1610-77), in the Zwinger, at Dresden.



FIG. 9. TWO-HANDLED CUP WITH STRAKEY PURPLISH-BROWN GLAZE. H. $5\frac{1}{2}$ INCHES. BRIT. MUS.



FIG. 10. BLACK-GLAZED TUG, DATE 1611-12.

local make, for we read in one of the Losely MSS. (of sixteenth-century date) that 'the gentlemen of the Temple drank out of green earthen pots made from a white clay found in Farnham Park', and Farnham Park is no great distance from Basing.

Another kind, of which a few fragments were found, has that thin, hard red body and brownish-black glaze characteristic of a ware which has been called Cistercian, owing to its frequent occurrence on the sites of Cistercian Abbeys all over England.¹ It is quite distinct from the thicker, softer, reddish ware with purplish black glaze which seems to have come into general use in the seventeenth century (see fig. 10).

Fig. 10 is a 'tyg' with streaky, purplish-brown glaze ornamented by impressing a small stamp on the clay when soft.



Figs. 11 and 12. POSSET-POT AND MUG, WITH COMBED AND MARBLED GLAZES. SEVENTEENTH CENT. H. 4 $\frac{3}{4}$ INCHES. BRIT. MUS.

There are fragments of similar ware at Basing House, figs. 17 and 19; and one of them, part of a 'knobbed' handle, is hollow, and might have served as a spout for suction, or more probably as a trap to catch the unwary drinker and make him spill his liquor, an evergreen alehouse jape. Other examples of early seventeenth-century pottery have bright yellow (fig. 14), orange-red, and particoloured glazes (fig. 20 is yellow and purplish-brown), some of them almost as variegated as the tortoiseshell ware of the mid-eighteenth century; see fig. 18, which has also a peculiar decoration of bosses roughed with shavings of clay.

A lead-glaze is used on these wares, as on the slip-ware which is considered next. It is of a yellowish tint, but transparent enough to allow the colour of the clay beneath to make itself felt. Variations in colour were obtained by the use of oxide of

¹ See *Catalogue of the English Pottery in the British Museum*, 56.

manganese, which produced a purplish-brown, and oxide of copper which produced a bright transparent leaf-green.

There are several fragments of 'slip wares' among the Basing House finds. In this class of pottery the ornament is trailed on in the form of a creamy mixture of clay and water known by the potters as 'slip'. The ornament is either clearly expressed in lines or dots, or combed over the surface in vague marbling; see figs. 11 and 12. Several of the fragments seem to belong to a particular class of slip ware, known as 'Metropolitan slip', from its frequent occurrence in the neighbourhood of London, and dis-



Fig. 13. JUG OF METROPOLITAN SLIP WARE. H. $11\frac{1}{2}$ INCHES. BRIT. MUS.

tinguished by simple trailings of somewhat thin slip on a deep-red body. Dated examples of this ware range from 1630 to 1660, and the vessels are often inscribed with pious phrases and texts, e.g. Watch and Pray; Feare God; Remember thine end truly, which seem to indicate that the potters, if not Puritans themselves, had at any rate a large Puritan *clientèle*; see fig. 13.

Most of the English wares found at Basing House are of the common domestic kind, used principally in the kitchen and scullery. The kitchen pots, which are as a rule only glazed inside, include saucepans, pannikins, pipkins, frying-pans,



Figs. 14 and 15. YELLOW GLAZED PANNER AND PIPKIN (0.5 INCHES).

Fig. 16. HALF OF A GREEN GLAZED CON-
DIMENT DISH. BRIT. MUS.

colanders, washing-bowls, and condiment dishes. There are besides fragments of a few more interesting objects such as jugs, mugs, and posset-pots, candlesticks, and flower-pots. They were no doubt principally of local make, for there is reason to believe that flourishing potteries existed at Farnham, Fareham, and Salisbury, all within reasonable distance of Basing. The London market would supply the rest, including the foreign goods.

17



Figs. 17-19. FRAGMENTS OF POTTERY WITH STREAKY PURPLISH-BROWN GLAZES. BASING HOUSE.

There is little trace left of the finer wares which must have been used by the masters of Basing House and their guests. No doubt they were sufficiently interesting to be cared for by Cromwell's soldiers. There are, however, a few specimens of the more refined vessels among the Rhenish stonewares and the tin-glazed fragments; but the most interesting relic of the kind is a piece of a Chinese vase or ewer, of blue-and-white Ming porcelain: ¹ see fig. 22.

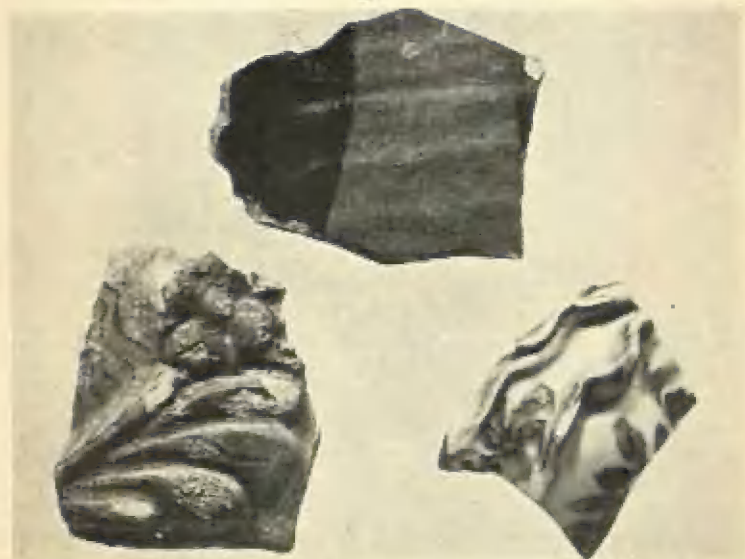
Another fragment of Chinese blue-and-white porcelain seems to belong to a later period, and was probably a contemporary of

¹ It is apparently part of a ewer such as may be seen in Wall-case 55, in the Oriental Saloon in the British Museum.

the Staffordshire blue-printed earthenware, and the Lambeth brown ware with Toby-filpot figures in relief, both of which are nineteenth-century intruders.

Two more objects remain to be mentioned. The first a fine terra-cotta roundel which is now fixed to the wall of the Museum. It is mentioned by Mr. Peers¹ as belonging 'to the same category as the terra-cotta roundels still in position at Hampton Court, made by Giovanni Maiano about 1520, and in execution probably superior to them'. It has a square frame about $2\frac{1}{2}$ feet in length

20



21

22

FRAGMENTS OF POTTERY, ETC. FROM BASING HOUSE.

Fig. 20, WITH YELLOW AND PURPLISH-BROWN GLAZE. Fig. 21, PROBABLY ITALIAN MAIOLICA. Fig. 22, CHINESE PORCELAIN.

with a circular cavetto in which is a bust of a Roman emperor in high relief, surrounded by a beautiful scroll, the volutes of which end in dolphins and cherubs alternately.

The other object is more commonplace though of considerable interest. It is a bowl-shaped flower-pot made of red brick earth, deeply incised with the arms of the Paulets, *three swords in pile*, and their motto AIMEZ LOYALTE surrounded by conventional foliage. The designs are at present filled with a white clay or chalk, but it is too soft to have been fired into the ware, and it is improbable that the inharmonious effect of the white

¹ In his paper "On the Excavation of the Site of Basing House," p. 12.

design in the brick-red ground was ever intended by the original maker of the pot. There are several of these flower-pots in the gardens adjoining the Museum, and they are provided with baluster-shaped stands of the same red ware. They were no doubt made in the early years of the seventeenth century at a local brick-kiln, and have no apparent relation to any variety of the ceramic productions of the time."

Mr. PEERS congratulated the author on the amount of history he had extracted from the potsherds of Basing House. It was interesting to see what vessels and wares were to be found in a large house early in the seventeenth century, whether of English or foreign manufacture. He doubted whether the ornamental tile exhibited really came from Basing House; one certainly came from the church, and a number with hunting scenes were in its north-east chapel, which also contained some bearing the initials W.P., no doubt made for Sir William Paulet, who built the house.

Col. LYONS knew of no other instance of flower-pots like those at Basing, and had never seen earthenware of that date treated in such a manner. The specimens seemed not to be glazed, and he inquired whether they were purely local or could be matched elsewhere.

Mr. HOBSON replied that he knew of no other cases, and the flower-pots were evidently fired in a local brick-kiln. Though the designs were incised and filled with white, the process could not be described as encaustic without qualification, as the clay filling was probably not fired into the mass.

The PRESIDENT regarded the paper as a good instance of what could be derived from the study of neglected things. Such fragments were found on most old sites, and could be made to tell an interesting story. They threw light on our foreign trade-relations, and pointed to extensive importation of pottery; witness the cullen (Cologne) pots which were even found in the sea round the east coast. Large tiles like that exhibited were certainly more common in religious than in private houses, and it had been suggested more than once that they were designed and made by the monks. Another interesting point was the evolution of certain pottery forms from wooden or metal prototypes.

WORTHINGTON G. SMITH, Esq., Local Secretary for Bedfordshire, communicated the following notes:

THE OLD BELFRY DOORS AT THE CHURCH OF ST. PETER,
DUNSTABLE.

"In 1908, after the death of Mr. G. F. Bodley, F.S.A., the

architect who had the restoration of Dunstable Church in hand, the old wooden doors to the thirteenth-century arch of the tower were removed and replaced by a new door of oak with iron hinges, supplied by Messrs. Franklin, of Deddington, Oxon. The design was furnished from the late Mr. Bodley's office.

In taking down the old doors, the upper or tympanum part, which was a fixture, was broken to pieces and lost. This upper portion had an original circular orifice, 15 inches in diameter. What this opening meant is uncertain; it is crudely shown in Buck's view of the church, dated 1730, and in Coney's view, dated 1818. The remains of these doors are now located inside the church tower, covered with dirt and spiders' webs and rapidly falling to pieces. They are beyond further preservation. The wood is deal, softened with decay, and obviously some centuries old. The only clue to the possible age is the section of the brace mouldings on the outer surface; these are of a superior class and well executed. The doors at one time had a good artistic and antique appearance. Both exterior and interior have been very much patched up in late times. Originally the doors when closed and locked were kept in place by a long and heavy bar of wood which fitted into deep recesses in the inside jambs. When only one half, the north, was required to be open, the south half was held in place by a partially twisted iron rod which, when not in use, hung from an iron staple in the jamb as drawn.

The woodwork is remarkable for bullet holes, which cover the doors from top to bottom; the holes are uniform in size. All the leaden bullets have not quite pierced the wood, and some are still in the wood. Two bullets have been carefully cut out, leaving square perforations, by some curious person or persons in the past. One bullet appears to have been shot into the lock, judging from the shattered state of the lock-plate inside.

No bullet holes occur in the large and strong oaken doors of the entrance to the nave; this may be accounted for by their obviously much greater strength.

The bullet holes may represent a successful attempt to force the church doors in the time of Charles I, judging from an account quoted in a *Perfect Diurnal*, under date June 24-July 1, 1644, as follows:

*1644. A diurnal of the 24th June states that Parliament had received information that the Kings forces had made incursions into Bedfordshire and that on the last Lord's day the King passed through Hockley-in-the-Hole¹ towards Bedford and in the way plundered Leighton² and sent another party to Dunstable, who plundered the town and committed great outrages in the

¹ Hockliffe.

² Leighton Buzzard.

church during the time of divine service, shooting at the minister in the pulpit and wounding several of the congregation.'

THE SANCTUS BELL AT THE CHURCH OF ST. PETER, DUNSTABLE.

The material is bell-metal, roughly cast, the clapper and the suspension staple are iron; it hangs from iron staples nailed on to blocks of wood bolted together.

The diameter of the bell at the mouth is $14\frac{3}{4}$ inches and the entire height is $15\frac{1}{2}$ inches; the metal is about 1 inch thick and the weight is about $1\frac{1}{4}$ cwt.

An inscription, in capitals, encircles the upper part of the body of the bell, as follows:

✠ AVE : MARIA • GRACIA • PLNA ✠

North, in his *Church Bells of Bedfordshire*, is not quite right when he says the inscription is in full, as an E is omitted from the word PLENA. North's little engraving of the cross in the inscription is very inferior to the one on the bell.

From an entry in the *Annales Prioratus de Dunstaplia* a bell appears to have been made at Dunstable in the second year of the Black Death, viz. 1349. The entry reads:

'Memorandum, quod anno Domini MCCCXLIX, tempore pestilentie, parochiani de Dunstaple fecerunt sibi unam campanam, et vocabant eam Mariam. Et prior Rogerus commodavit plumbum ad cooperiendum campanile.'

Prior Roger was Roger of Gravenhurst; he was elected in 1348, the first year of the Black Death, and resigned in 1351.

North has fallen into a strange error about a Dunstable tradition as to Matilda, wife of Henry I, consecrating this sanctus bell at Dunstable. The tradition obviously refers to an earlier bell. Strangely enough North says (page 147), there is 'nothing improbable in the tradition as to the benediction of the small sanctus bell, which may well have escaped the destruction or recasting of the larger bells, and so have come down uninjured to our own time'.

The bell is now kept in an open wooden cage in a dark and dirty corner of the belfry, above the larger bells.

ROCKERY WITH SCULPTURED STONES AT DUNSTABLE.

About 230 feet east of the church of St. Peter, Dunstable, on the boundary of a field known as the Priory field, there stands a piece of modern 'rockwork' with the rebuilt stones of a very small fourteenth-century doorway. It is composed of flints, stones, sculptured and unsculptured, tiles, and old wine and spirit bottles.

The few sculptured stones presumably belong to the old church. Seventy years ago walls connected with this rockwork, also containing sculptured stones, extended to both north and south, and formed a boundary wall to the field. The walls have long since been pulled down and all the stones, carved and uncarved, used for the roads. A fence and bushes replace the wall. Alterations are now going on, and it has been proposed to pull the rockery down; this indeed would be no loss if some record is kept of some of the constituent stones.

Three of the stones are parts of Transitional Norman pillar shafts, and probably belong to the west front of the church. They fit on the old capitals still on the building. Plain shafts have been added to the old capitals under a recent restoration, but although some remains of plain shafts are shown on some old engravings of the church and some plain old pieces are still *in situ*, yet it seems probable, as the columns were free, that the older carved examples fell out and were replaced with plain ones. It seems improbable that the originals were plain, when all the other Transitional work is richly carved. Whether this surmise is right or wrong, the pieces on the rockwork agree in size with the capitals. One of the most remarkable of the stones has been used as a kind of keystone, and appears to be early Norman work, belonging to the now demolished oldest part of the church. It appears to represent the head of a Norman knight with helmet and nose-piece, closely resembling the representations of helmets seen on the Bayeux tapestry.¹

THE STONE SCREEN IN THE PRIORY CHURCH OF ST. PETER, DUNSTABLE.

The stone screen at the church of St. Peter, Dunstable, connects the first nave piers, counting from the east end. There is no trace of any connecting work across the aisles, although there is original Norman work in the south aisle where traces of the screen should be if it had ever existed.

Until the year 1891, when the church was under restoration by Messrs. Bodley and Garner, the whole of the screen within the church was hidden by a thick coating of whitewashed plaster. The plaster was to a great extent covered by an enormous upright picture, painted on canvas, by Sir James Thornhill. This picture represented the Lord's Supper; it was suspended by three

¹ During the last week of May this structure was totally destroyed and cleared off the ground. One carved piece was rescued. All the pieces were smashed up and rammed into foundations for posts for a fence. The head with the Norman conical helmet and nasal was smashed first, so the men say. My drawings are therefore the only record.

large brass rings hung on to three huge iron nails driven into the upper part of the screen. The figures of this picture were half as large again as life, and large Corinthian columns were painted at right and left. On either side of the picture were flat painted figures of Moses and Aaron cut out of wood; below them were panels containing the commandments. A painting of the Royal Arms was also fixed to the screen. As a boy sixty or more years ago I can remember tiers of wooden seats being temporarily built across the chancel (and covering the altar) for the accommodation of school children at missionary and other meetings. In removing Thornhill's large picture, during one of the restorations, the workmen contrived to push a scaffold pole through it. It was then taken off the frame, rolled up, and placed erect in the church tower. A small piece still remains, the rest has rotted away with damp.

When Messrs. Bodley and Garner removed the plaster, it was seen that the upper half of the stonework was thinner than the lower, very rough, and but little better than rubble; it contained, however, many well-carved stones, chiefly of thirteenth-century date. The lower part was good, well-executed masonry. For purposes of restoration it became necessary to remove a little of the upper part of this good work, and it was then seen that many fine and fresh pieces of thirteenth-century work were built in. The carved stones included a considerable number of fine thirteenth-century capitals. They were placed in the churchyard, and at the present time practically nothing remains; the material was Totternhoe stone, which speedily shatters when exposed to winter frosts. The rubble work was taken down and replaced by a better class of masonry.

The removal of the plaster brought to light two filled-in doorways of different sizes, two beautiful niches, and a central piece of carving, all dating from about the end of the fourteenth century. The doorways originally possessed label mouldings, and the niches had slender columns and canopies, traces of which were clearly visible, but all this projecting work had been chiselled away, so that a flat surface might be secured for Thornhill's picture and the commandments. The niches showed traces of rich painting and gilding, some of which still remains. The southern and larger niche at one time contained a life-size figure of St. Mary, as the monogram MR was clearly visible at the upper part when first exposed, but it is not visible now; the position of the MR and all other details are shown on the accompanying scale-drawing. The northern niche is less in height and with insufficient room for a life-size figure of St. John, but it is large enough for a life-size kneeling figure of St. Gabriel in the Annunciation. The large central piece of work was greatly injured before its

discovery, but there were clear traces of a life-size figure of the crowned Lord with angels, and three fragments of these figures were found, but none is in existence now.

The exterior of the screen can only be seen on some private property called the Priory garden. This part I have carefully measured and drawn to scale. The exterior shows that at one time there was a large central opening, and the arch formed a segment of a circle; this opening led from the nave to the quire, and suggests that the present rood-screen as seen from the inside was originally a quire-screen, but there is not a trace of carved work to show the probable date of the central opening. The bedding of the outside masonry is very involved. None of the courses agrees with the Norman work, and although the two minor filled-in openings at right and left agree with the interior openings, yet the surface work of the outside of these doorways is later in date than the interior and very inferior in execution. The different courses of masonry are clearly shown on the drawing. When this stone screen ceased to be used as a rood-screen, the two doorways were filled in with masonry not agreeing in its courses with the door jambs. The patching up of the interior masonry at the right and left of the altar is remarkable.

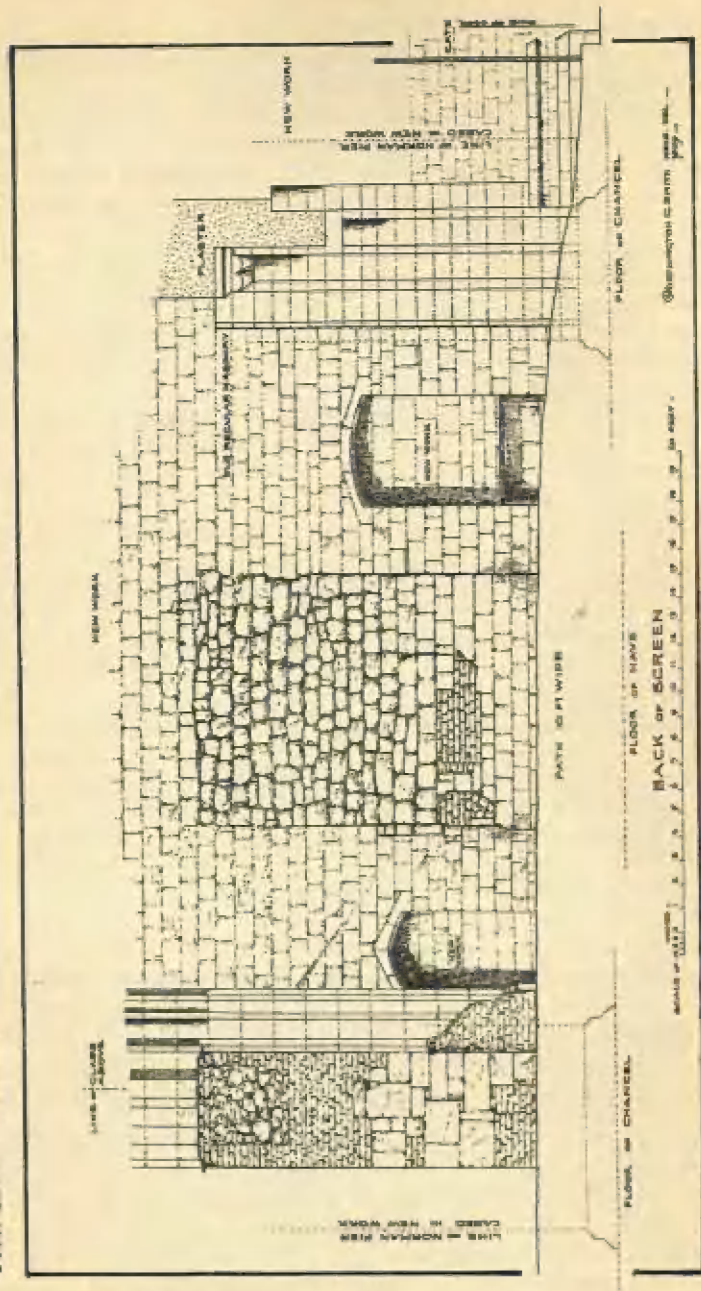
It will be observed that the lower good masonry, except the filling of the two doors, has recently been thickly painted and decorated. This painting has obscured the courses of masonry a good deal, and they are invisible in the flamboyant upper part. The paint added greatly to the difficulties of making an accurate drawing. It will also be seen that curtains hide the niches; the curtains can be drawn aside a little, but even then the niches can only be partly seen. The central part, where I have drawn a dotted quatrefoil, where fragments of the figure of the Lord in glory were once visible, is now wholly hidden.

There are no traces of a rood-gallery.

On reference to the plans it will be seen that the two Norman piers to which the screen is attached were greatly strengthened towards the end of the fourteenth century. The work on the south pier only remains; that on the north, by accident or design, has vanished. This would seem to indicate an intention to make these two piers the western piers of a newer middle tower. They certainly were not tower piers in Norman times, for part of the northern pier is seen outside, and this proves that it was only a nave pier. There was probably one more bay to the nave in Norman times, as shown on one of the plans.

The Wooden Screen.

This is ancient work, except the upper tier, which is new. It has only recently been placed where it now is. Some time before



Messrs. Bodley and Garner's restoration it was fixed at the west end of the church under an organ gallery. It, however, very probably stood at one time where it now is, and then extended across the aisles. I send a photograph, recently kindly given to me by Mr. Aymer Vallance, F.S.A., from a drawing found by him in the museum at Maidstone. Although crude, it is correct and instructive, for it shows the original Norman work of the aisle as it existed in 1838, as well as part of the wooden screen; the part of the screen on the left shows the screen without the modern upper tier, and on the right a slight variant of the design across the aisle. In 1838 it obviously had been mutilated. A wooden rood-gallery might have existed, supported on the tops of the capitals one bay to the west, but no traces are now visible."

Thanks were ordered to be returned for these communications.

THURSDAY, 14th APRIL, 1910.

CHARLES H. READ, Esq., LL.D., President, in the Chair.

The following gifts were announced, and thanks for the same ordered to be returned to the donors:

From Horace Sandars, Esq., F.S.A.:—*Histoire de l'imagerie populaire flamande*. Par E. H. van Heurck et G. J. Boekennoogen. 4to. Brussels, 1910.

From Lewis Appleton, Esq.:—Three letters relating to Urso d'Abitot and the Castle of Worcester. (Reprinted from *Berrow's Worcester Journal*, 1909-10.)

From Henry Taylor, Esq., F.S.A.:—*Lydiat Hall*, near Ormskirk, Lancashire. A paper read before the Historic Society of Lancashire and Cheshire, 1894, by Henry Taylor and Edward W. Cox. 8vo. Liverpool, 1895.

George Augustus Auden, Esq., M.A., M.D., was admitted Fellow.

Notice was again given of the Anniversary Meeting on Saturday, 23rd April, and lists were read of the Fellows proposed as President, Council, and Officers for the ensuing year.

G. F. HILL, Esq., M.A., read a paper on the early use of Arabic numerals in Europe, and showed a number of tables illustrating the development of the figures after they were brought to the West. About 800 examples were arranged in chronological sequence under the various countries, and exhibited peculiar local forms in certain cases. They were derived from

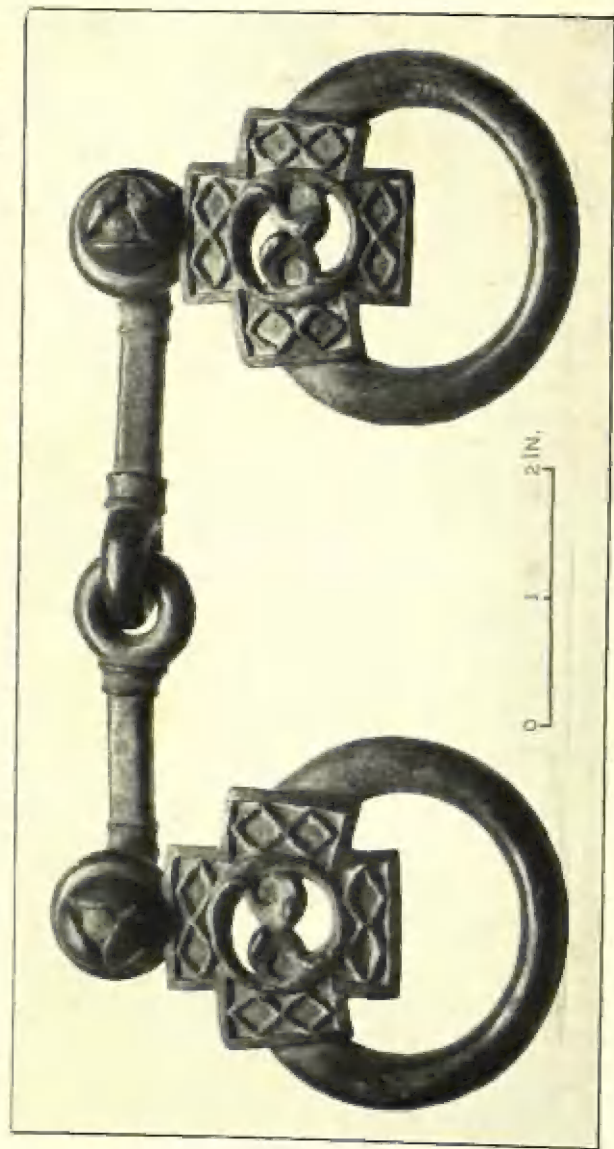
MSS., inscriptions on architecture, monumental brasses, bells, seals, paintings, coins and medals, woodcuts, printed books, and various other sources, chiefly English, Netherlandish, German, French, and Italian. There were instances of Arabic numerals in MSS. as early as the tenth century, but these numerals were not well known till early in the thirteenth century, and became general only in the sixteenth. The figures 2, 4, and 7 were the best criteria for dating, the modern 2 being rare before the end of the thirteenth century, and the modern 4 and 7 appearing late in the fifteenth. The numerals on the façade of Wells Cathedral dated possibly from about 1250, in any case not later than 1300. There were German brasses with Arabic figures dated 1383 and 1388, and seals still earlier, one being 1351; but other examples of seals with dates 1235, 1320, and 1331 were doubtful or not contemporary. French examples were rare; Germany led the way as regards actual use, and Italy as regards development of form.

Mr. ROSENHEIM said that Mr. Hill's paper was the result of some years of hard work, and was of great importance as a work of reference for students and collectors. He regarded the seals of Count Gottfried von Hohenlohe and of the City of Trostberg as forgeries, and mentioned, with regard to a seal at Nuremberg, that the monastery of St. Oswald was under the jurisdiction of Niederaltaich. Some years ago he had seen and condemned a seal-matrix of Buxheim which bore a date 1440 on the back in Arabic numerals; and Mr. Hill had now proved that the upright 4 did not occur before 1500 in Germany. The forger had probably copied the numerals from some Italian seal or medal, and so betrayed himself.

Mr. LEACH expressed a hope that the paper would be provided with references when printed, and mentioned a MS. of Merton College, Oxford, in which the days of the week were all in Arabic numerals of modern type.

Mr. G. J. TURNER remarked that the peculiar system of mixed notation might have been introduced by Cardinal John of Toledo, one of the most learned men in England during the reign of Henry III. The 3 was often used in legal MSS. of the early fourteenth century, but he had not noticed any other Arabic figures in those documents.

Mr. PALEY BAILDON said the paper would be of great use to all concerned with MSS. Pagination was not always contemporary with the text, as was well shown by the double pagination of a thirteenth-century MS. of Kirkstall Abbey: the



LATE-CELTIc HORSE-BIT OF BRONZE. FIRST CENT. A.D.
From the Thames

earlier foliation was in Roman figures, the later in Arabic, certain pages having been lost in the interval.

Mr. HORN denied that the 1410 ever existed on the Campden brass at Winchester, but it did occur in Arabic numerals on one of the seals of Fountains Abbey, published by the Surtees Society and undoubtedly genuine. With regard to the archaic-looking figures at Wells, he now thought that they were contemporary with the imagery on which they were cut.

Mr. HILL replied that with the exception of one form that looked like a modern 5 but might be a 3, all the Wells numerals could not have been in use together after about 1330. They were normal for the middle of the thirteenth century, and if not contemporary with the imagery, a very early restoration would have to be assumed.

The PRESIDENT exhibited a Late-Celtic bridle-bit of bronze found in the bed of the Thames, on which he read the following notes :

"I am always glad of an opportunity of bringing before the Society any remains of the Late-Celtic period. There is so much charm of style and originality of design in every piece that one encounters that a new discovery is sure to present points of difference from any that has been known before.

The example I have the pleasure of showing the Society to-night (see illustration) is no exception, though horse-bits are very common among Late-Celtic discoveries. Common though they may be, there is no object that demonstrates in a more convincing way the complete mastery of their craft possessed by these British workmen. For the quality of the metal employed, the beauty of the lines, and admirable finish of every detail, these bits are not to be surpassed.

The specimen I show was found in the bed of the Thames, and in the interstices of the engraved ornament are remains of the characteristic sandy deposit that is of itself almost sufficient to indicate its place of finding.

The bronze has a pleasant green patina, much lighter on the back than on the front, and the rings on both sides show signs of hammering, a feature not commonly seen in Late-Celtic bronzes. This bit presents several peculiarities ; first, the bar is square in section, and second, the check-rings are ornamented with a cruciform panel with lozenge-shaped divisions once filled with enamel, of which no trace now remains. The centre of the panel is circular, and the circle is partly filled by one of the characteristic designs of eccentric curves that add so greatly to

the charm of British art of this period. The date of this example may be put down as first century A.D.

A similar bit was found at Birrenswark in Dumfriesshire,¹ and a small piece of bronze among the Polden Hill hoard has the same style of decoration as the lozenges in this bit.

This interesting specimen has been presented to the British Museum by our Fellow, Mr. Max Rosenheim, through the National Art Collections Fund."

MR. CRACE drew attention to the remarkable similarity between the ornament at the curved ends of the bars and the ball-flower of Gothic architecture during the fourteenth century.

DR. ARTHUR EVANS remarked that the cruciform ornament on the rings was quite abnormal, and the boldness of the relief in the centres suggested a somewhat earlier date. Some of the best Late-Celtic remains belonged to the first period of invasion during the Iron Age, but there were two points to be considered: the occurrence of a somewhat similar specimen in Dumfriesshire, and the use of champlevé enamel in a lozenge pattern, as on certain Romano-British brooches, found principally in the North. Perhaps the latter also preserved a Celtic tradition, but their date agreed well with that assigned in the paper to the bridle-bit.

THOS. H. POWELL, Esq. exhibited, through Mr. Reginald Smith, a Bronze Age sword found in the Thames between Wallingford and Dorchester. It was of the ordinary leaf pattern, without notches at the base of the blade, and was perfect but for about half of the handle, its principal feature being a bluish-green patina, almost of turquoise colour, that covered much of the blade on both faces. Objects of this kind from the Thames are generally of a deep golden colour, and the best examples of this glossy green surface are found abroad. In the British Museum are several swords of this appearance, found together at Zsujta, Abauj, Hungary,² and many other specimens are known from the same country, but this patination is rather exceptional in other European countries.

DR. FRANK CORNER exhibited part of a Bronze Age hoard dredged from the Thames off Broadness, on which Mr. REGINALD SMITH read the following paper:

"The greater part of the bronze hoard dredged from the Thames off Broadness about 1892 is now accounted for, and has

¹ Munro, *Prehistoric Scotland*, 250, and *Catalogue of Edinburgh Museum*, 198.

² Hampel, *Bronzezeit in Ungarn*, plates ci, cii.

passed into three collections. A portion came to the British Museum with the Greenwell collection of bronze, and eighteen pieces were recently bequeathed by Mr. W. H. Lloyd to the Richmond Public Library, where they are now exhibited in a small museum. Dr. Corner's series, which he has kindly sent for exhibition, brings the number of known specimens from the hoard up to about forty, and he thinks there may be eight still at large, one having been thrown back into the river.

No apology is necessary for calling these bronzes a hoard and treating them as such, though the association was in this case not absolutely certain. So far as can be ascertained, they were brought up by dredgers into two barges working together at a spot off the west side of Broadness between Greenhithe and Northfleet, where ballast was being obtained from below the superficial deposits of peat and clay in the bed of the river. Dr. Corner states that the alluvium at this point is of considerable thickness; and except in mid-stream, where the bottom is regularly scoured, the ballast cannot be obtained before the overlying strata are removed. An instructive section of the river-bed exposed during the construction of Tilbury Docks beyond Broadness was published by Sir Richard Owen in his paper¹ on the human skeleton found there at a depth of $34\frac{1}{2}$ feet. The bronzes were dredged from the first few feet of the deep ballast; and the neolithic implements, brought up at the same time, certainly did not reach a depth of 45 feet, where the ballast was met with at Tilbury; but it is not easy to explain how a hoard of the Bronze Age found its way into the ballast through a considerable thickness of alluvium.

It may be taken as certain that most of the bronzes lay in close proximity to one another and constituted a hoard; but the neolithic flints, which numbered several hundreds and comprised flakes as well as finished implements, may have been at another and a lower level. Even if such were some-day to be found in clear association with bronze, it would surely be with early metal types and not with pieces that bring us to the threshold of the Iron Age. A hoard of flint in the Thames is no more extraordinary than one of bronze, the only wonder being that both occurred on the same spot. Flint implements of this pattern are very common in the lower Thames at a constant level below the peats and clays, and examples have been laid before the Society on more than one occasion.² These long unabraded tools with parallel edges and lozenge section are considered by

¹ *Antiquity of Man*, frontispiece; see also *Proceedings of the Royal Society*, xxxvi. 156.

² One of unusual length is figured in *Proceedings*, 2nd S. xxi. 152 (Heatham, Norfolk). Specimens have also been dredged from Puddingpan Rock, Herne Bay (*Proceedings*, 2nd S. xxii. 413.)

some to have been used as adzes for hollowing out tree-trunks for boats, and the type is well represented in the British Museum. It has some resemblance to a smaller and finer type found in the flint-mines at Cissbury, but is closer to a specimen found in a grave with urns at Abbeville and presented to the Museum by M. Boucher de Perthes. The date must therefore remain unsettled at present, but the presence of a large number of small implements and flakes indicates that there was a factory or store of flint tools on this spot.

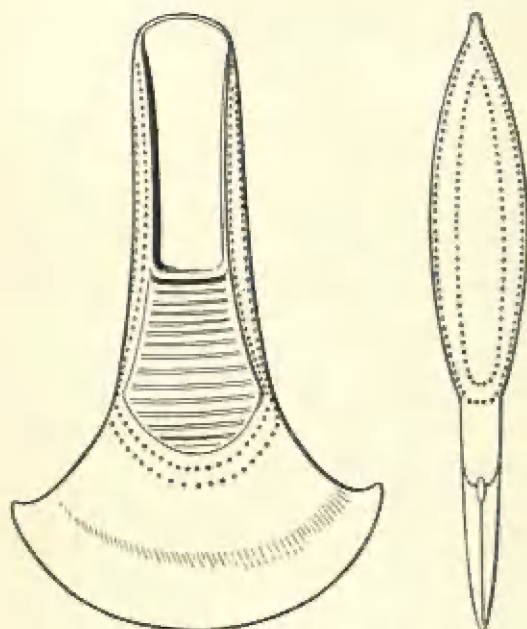


Fig. 1. ORNAMENTED BRONZE CELT, FROM THE THAMES AT BROADNESS ($\frac{1}{2}$).

It is worthy of remark that an ornamental celt of the flanged type (fig. 1) is also said to have been dredged up at the same time and place; but stronger evidence is required before it can be considered part of the bronze hoard. The celt, which has been vigorously cleaned, is not in the same condition as the other metal objects, nor of the same date if any reliance can be placed on current schemes of chronology. It was evidently not scrap-metal, and should date from a much earlier period of the Bronze Age,¹ before

¹ Its place in the series of development is indicated in the *Bronze Age Guide* (British Museum), fig. 16, d.

the socket was in general use,¹ while the spear-heads and ferrules show a complete mastery of socket-casting, and indeed a decadence in the art that specially flourished in the British Isles.

Whatever the date of the flints and their relation to the bronzes, it is possible to fix the relative date of the latter with some precision, and the first group to consider consists of broad spear-heads. The following remarks of Sir John Evans dispose of the notion that this type of spear-head was used for spearing fish :

It has been suggested that these weapons were fishing-spears, and certainly their barbed form, so distinct from that of the more common spear-heads, raises a presumption that they were intended for some special purpose. It appears to me, however, as it has already done to others, that such weapons are too clumsy to have been used for the capture of fish of any ordinary size, and would have made sad havoc even of a forty-pound salmon. If they were used for the chase at all, it is more probable that they were intended for attacking large four-footed game, such as wild oxen, either by thrusting or darting, and that the weapons were left in the wound, the shafts encumbering the animal in its flight. If, as would probably be the case, these got broken by the animal, the long rivets were well adapted for being removed so as to allow of the broken shaft being taken out, and would again serve to retain a new one.

The theory was no doubt due to the fact that several spear-heads of this type have been found in or near large rivers, but the Thames, at least, is famous for the quantity and diversity of its bronze relics, and early man usually preferred to live and hunt in the neighbourhood of fresh water. Further, weapons were very apt to be lost when their owners were crossing a ford, or holding the passage against an advancing enemy.

The makers of the type in question (fig. 6, nos. 8, 9, 16, 17, 23-7) seem to have aimed at breadth rather than solidity, and a feature common to all is the shortness of the point. To economize metal and no doubt to lessen the weight without decreasing the size, the casting is much thinner than usual, and it has been noticed that the clay core is seldom if ever removed completely, and consequently would prevent the shaft extending far into the socket, which itself practically reaches the point. Near the other end of the blades the socket expands laterally, unlike the uniformly tapering socket of the leaf-shaped spear-head, and is also much flatter, the oval section continuing below. This last feature is seldom found on other spear-head types, but is common in the barbed series, and also occurs in a Thames

¹ The Arretton Down hoard, which shows the beginning of the socket, included celts rather earlier than the one here figured. Its importance is fully realized in a recent paper by our Fellows, Canon Greenwell and Mr. Parker Brewis (*Archæologia*, lxi. 447).

example (fig. 2) that seems to supply a missing link in the chain of development. It was found, attached by partial fusing

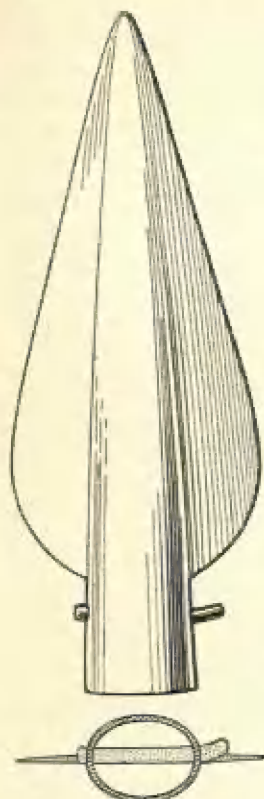


Fig. 2. SPEAR-HEAD
WITH OVAL SOCKET AND PEG,
THAMES, NEAR KINGSTON ($\frac{1}{2}$).

to a leaf-shaped spear-head and part of a sword-blade, in the Thames, near Kingston,¹ and retains the long bronze peg through the flattened socket which is characteristic of the barbed spear-head. Moreover, the blades, though tapering to the point, are very broad in proportion at the base, and seem to herald the approaching change to parallel edges and a blunt point; but between it and the fully barbed variety there is an intermediate stage to be noticed. This is well represented in the well-known hoard from Broadward, Shropshire (near Leintwardine, Herefordshire),² which in several particulars strikingly resembles the Broadness series; and contains several broad spear-heads in a corroded condition that have the blades squared at the shaft-end, forming a right angle with the socket.³ Close below the blades are the holes for attaching the shaft, and in some cases the bronze pin remains in position. The socket between the blades is barely noticeable, the blades sloping away direct from the middle line, and being themselves hollow almost to the edges. The proportion of the width to the length of the blades is roughly as three to five, and the result is a stumpy weapon, cast very thin, and sometimes having crescent openings in the socket itself near the lower end.

It is not at present clear why the blades were extended in the form of harbs almost to meet the projecting ends of the bronze peg, but this is a common feature in the longer specimens, some of which also have the crescent openings flanking the socket (as fig. 6, no. 25).

¹ British Museum; *Proceedings*, 2nd S. i. 125. It is mentioned with the barbed specimens by Sir John Evans, *Bronze Implements*, 338.

² *Archaeologia Cambrensis*, 4th S. iii. 338, 345. A considerable portion of this hoard is now in the British Museum.

³ The partly fused specimen from Thames Street is of this pattern; and the two forms of 'barbed' spear-head are distinguished in *Archaeologia*, lxi. 454.

The longer the spear-head the less necessity for barbs, and that the barbs were never utilized as such is clear from the position and length of the peg (fig. 6, nos. 16, 23, 25).

The exact relation between the Broadward and Broadness varieties may some day be discovered, but it seems evident that the barbed spear-head is an eclectic weapon, a blend of several contemporary patterns. The lateral swelling of the socket gives it a curve much like that of a spear-head from the Guilsfield hoard,¹ and another² from the Thames at Richmond in the British Museum (Greenwell Collection, no. 1669), the edges of which contract towards the base and join the socket at right angles, a peculiarity carried to excess in the Broadward examples. It is also possible that this abrupt ending of the blades was a survival from a common type with loops in the angles between the blades and socket, as Evans, figs. 405, 406: the curves of the former figure bear some resemblance to the barbed spear-head.

Next, the crescent openings in the blades on either side of the socket are frequently found on leaf-shaped and other spear-heads in the British Isles, but are extremely rare abroad.³ That they were in vogue at the same time as the barbed spear-heads is shown by their occurrence on leaf-shaped specimens in the hoards from Broadness (fig. 6, nos. 18, 20) and Broadward,⁴ as well as in the Dowris (King's Co.) and Wilburton Fen (Cambs.)⁵ hoards, which have no barbed spear-heads but agree with Broadness in some other respects.⁶

The oval socket again occurs, though rarely, in leaf-shaped spear-heads, in addition to the Kingston example mentioned above, though the actual orifice is circular in some of the typical barbed spear-heads, the flattening being between the blades.

What appears to be a compromise between the leaf pattern and the barbed spear-head is described (but not illustrated) in an account of the Broadward hoard: 'fig. 3 E is merely the mutilated head of one of the same (barbed) class, with depressed mid-rib. It seems, however, to have been less broad, and some-

¹ *Proceedings*, 2nd S. ii. 250.

² *Archaeologia*, lxi. pl. lxxviii, fig. 36.

³ From the Continent may be mentioned one with a bronze peg, said to have been found in the neighbourhood of Abbeville (Boucher de Perthes Collection), figured in *L'Anthropologie*, xv. (1903) 511, fig. 5, no. 30; on the same page are three spear-heads with loops at the base of the blades, all from the neighbourhood of Amiens, that also have a British appearance. Russian specimens seem to have been due to the prolongation of barbs to join the socket. Several references are given by Montelius (*Archiv für Anthropologie*, xxvi. 987).

⁴ *Arch. Camb.* 4th S. iii. 352, no. 8.

⁵ *Archaeologia*, xlviii. pl. v, fig. 2.

⁶ *Bronze Age Guide*, pl. ii, fig. 1.

what approaching the leaf-shaped pattern. This fragment measures $4\frac{1}{2}$ in. long and $2\frac{1}{2}$ in. broad.¹

Yet another feature of the barbed spear-head can be detected in other types from hoards of the latest Bronze Age. The extreme thinness of the casting has already been noticed, and is equally remarkable in leaf-shaped spear-heads from the famous Guilfield hoard,² from Fenny Bentley, Derbyshire,³ and the Thames at Richmond (Greenwell Collection, no. 1665). In these cases the bronze is little more than a hollow shell of lozenge section, a triumph of metallurgy but of little practical use.⁴

Common to all the barbed spear-heads is the short free socket, which is about one-fifth the length of the blades and in some cases even less. With so short a hold on the shaft the peg had to be placed as far from the opening as possible, and even then can hardly have been secure, as the shaft was flattened to fit the socket and was generally prevented from approaching the point by the clay core that was not entirely removed from within.

A small spear-head (fig. 3) from a hoard found at Hatfield Broad Oak, Essex,⁵ has all these features in embryonic form, and constitutes an interesting link in the development of the barbed type. The free socket is slightly oval and large in proportion, with a pair of large peg-holes (over $\frac{1}{2}$ inch diameter) immediately below the ends of the blades, which form rudimentary barbs. The blades run parallel for some distance, and between them the socket is obliterated, while the sectional view shows how little room there was for the shaft between the blades.

When the diversity and originality of British spear-heads of bronze are borne in mind, it is not surprising to find that the



Fig. 3. BRONZE SPEAR-HEAD FOUND AT HATFIELD BROAD OAK, ESSEX (1).

¹ *Archaeologia Cambrensis*, 4th S. iii. 349.

² To be illustrated in the forthcoming report on Montgomeryshire by the Royal Commission on Ancient Monuments in Wales.

³ *Proceedings*, 2nd S. xvi. 212.

⁴ *Archaeologia*, lxi. 454, figs. 45, 46 (Lloyd Collection, with the blade ending abruptly in rudimentary barbs).

⁵ *Proceedings*, 2nd S. xvi. 97 (Colchester Museum).

barbed type is peculiar to England and Wales; and as there are indications that the type dates from quite the end of our Bronze Age, it is possible that our Continental neighbours had by then discarded weapons of that metal and were fighting and hunting with iron spear-heads. The shape depended much on the metal employed and the method of working it, whether by casting or forging, and it must have been a happy chance that obviated the necessity of further experiments with bronze. The barbed type is certainly not an improvement on its British predecessors, and sufficient specimens are extant to show what an unserviceable weapon it was. Nor is it easy to understand why the utility of a bronze peg for attaching the shaft had not occurred to the British craftsman of the Bronze Age till the very end of that remarkable period. When at last it was invented, the bronze peg attained a length that was quite unnecessary and added nothing to the appearance of the weapon.

Specimens of this type recorded by Sir John Evans¹ or by Canon Greenwell and Mr. Brewis are from the following sites in England and Wales, a few references being added:

Speen, Berks; one weighing over $\frac{3}{4}$ lb. av. and measuring $10\frac{1}{2}$ in.

Severn, near Worcester; weight 8 oz.

Plaistow, Essex; one $10\frac{1}{4}$ in. long, with bronze pin $2\frac{3}{8}$ in. long in position (British Museum).

Chiswick, Middlesex; with bronze pin (*Archaeologia*, lxi. pl. lxxiv, fig. 54).

Thames, near Kingston; one (of transitional form) partially molten, the bronze peg in position (British Museum, fig. 2).

Thames, from Broadness hoard (*Archaeologia*, lxi. pl. lxxv, fig. 57), and a fragment in Richmond Museum.

South Brent, Devon; broken specimens, about 14 in. long, found with cylindrical ferrules; bronze pins in position.

Ferriby, Yorks., near the Humber; one like that from Speen (Greenwell Collection, now in British Museum, *Archaeologia*, lxi. pl. lxxiv, fig. 56).

Broadward, Shropshire; several in hoard with cylindrical ferrules; most of the bronze pins in position (British Museum, *Archaeologia*, lxi. pl. lxxiv, fig. 55).

Wrekin Tenement, Shropshire; fragments evidently of this type, with bronze pins, found with swords and a celt.

Pendoylan, near Cardiff; one 7 in. long with oval socket pierced on one side for pin, which is missing.

¹ *Ancient Bronze Implements*, 337; ferrules, 339.



Fig. 4. ENGRAVED
BRONZE SPEAR-HEAD,
BROADNESS HOARD ($\frac{1}{2}$).

To these must be added :

Thames Street, London ; one $5\frac{3}{4}$ in. long, found in a fused mass with leaf-shaped specimens, 1868 (British Museum).

Thames, London ; spoilt in moulding, the metal having flown (Corner Collection).

Godney, Som. ; one $11\frac{1}{2}$ in. long, found about 1890 (Glastonbury Museum).

The remaining spear-heads of the Broadness hoard (fig. 6, nos. 10-15, 18-22, 28, 29) are of the usual socketed type with variations, and are less important in themselves though of interest as being contemporary, and two show more or less elaborate decoration by engraving. The larger of these (fig. 6, no. 28, and fig. 4) is in Dr. Corner's Collection, and has a row of hatched triangles on the blades along either side of the tapering socket. The design is strikingly similar to that on part of a socketed spear-head¹ of the same type in the hoard found at Broadward, which offers other points of resemblance to the Broadness series.

The second ornamented spear-head (fig. 6, no. 13) is engraved round the socket (fig. 5) in bands and arches consisting of lunate stamps, in a style frequently found in this country and also in France at this period. It may be remarked that rows of crescent impressions constitute part of the decoration of a fragment of Late-Celtic pottery found at Yarnton, Oxon.²

Another point of interest is that both in the Broadness and Broadward hoards there are single leaf-shaped specimens³ with what may be termed (in botanical language) decurrent blades, the edges being continued along the socket as a flat band which embraces the peg-hole as an ornamental feature.

It should be added that the flattening and

¹ Figured in *Archaeologia Cambrensis*, 4th S. iii. 352, no. 7. Another, from Bilton, E. R. Yorks., in *Journ. Brit. Arch. Assoc.*, xx. pl. 8, fig. 3.

² *Early Iron Age Guide* (Brit. Mus.), fig. 137.

³ Specimen at Richmond, 10 in. long ; Broadward, $9\frac{1}{2}$ in. (*Arch. Camb.* 4th S. iii. 351, no. 5). The type is represented in *Archaeologia*, lxi. pl. lxxviii, fig. 35.

scratching of the socket near the point of no. 29 is due to contact with the steam navvy.

It is instructive to compare the sites of barbed spear-heads with those of cylindrical ferrules (fig. 6, nos. 1-5), as given by Sir John Evans.

Nettleham, Lincs. ; 8½ in. long, found with leaf-shaped spear-heads, palstaves, and socketed celts (Evans, fig. 423, British Museum).

Thames, near London ; 14 in. long, bluntly pointed at base, with portion of wooden shaft within (British Museum).

Guildsfield, Montgomeryshire ; one 14 in. long (Evans, fig. 424), found with eleven others 10-16 in. long, spear-heads of leaf pattern, and other articles.

Nottingham (near) ; one 9½ in. long found with spear-heads, socketed celts, etc.

South Brent, Devon ; four about 7 in. long found with barbed spear-heads, etc.

Antrim, Ireland ; one 9½ in. long, the end worn obliquely as if from trailing on the ground (Greenwell Collection, now in British Museum).

River Loire, France ; one measuring 14½ in., slightly expanding at the end (Nantes Museum).

They have also been found in the Somme Valley¹ and elsewhere in France, as well as in Switzerland (Estavayer) and Italy. Other specimens in the National Collection, more or less pointed, are from the Thames at Chelsea, Isleworth, and Kingston ; from Kilrea, Co. Derry ; from the Wickham Fen hoard and the Thames at Taplow (found with spear-heads and swords) ; while a shorter form has been occasionally found in England and Wales :

Pant-y-Maen, near Glanceych, Cardiganshire ; four found with spear-heads ; none more than 4½ in. long, expanding slightly at the closed end.

Cambridge Archaeological Museum ; a fragment with concave expanding end, 1½ in. across, probably from Cambs.

Broadward, Shropshire ; of six small tubes in the hoard one was of this type.

Beddington, Croydon ; small specimen in bronze hoard.

Wickham Park, Surrey ; fragment from hoard (British Museum).



Fig. 5. PUNCHED DESIGN ON SOCKET OF SPEAR-HEAD, BROADNESS HOARD (½).

¹ *L'Anthropologie*, xiv. 513, 518.



One with a flat spreading end¹ was found with swords and spear-heads at Thenford, Northants (British Museum), but the ferrules with a sharp point may well have resembled those used by certain of the Greeks before Troy, for Homer tells how the comrades of Diomedes were found sleeping around him with their shields beneath their heads and their spears driven into the ground erect on the spikes of the butts, and afar shone the bronze like the lightning of father Zeus.² The surprising length of some specimens both in this country and across the Channel implies spear-heads of corresponding weight, certainly longer and heavier than most of the barbed examples. That earlier types attained extraordinary lengths is shown by one from Croydon, in the British Museum, measuring $31\frac{1}{2}$ in., and another from Italy 7 in. longer. Both the pointed and trumpet-pattern ferrules are found in that country and are represented in the Greenwell Collection.

A few words are necessary with regard to the minor pieces in the hoard, which all point to an extremely late period of the Bronze Age. The small knife (fig. 6, no. 6) has on both faces of the tang a longitudinal rib, no doubt intended to prevent any lateral movement in the handle; and the same feature³ is found on two specimens in the Dowris hoard already mentioned, also in the Westow (Yorks.) and Heathery Burn (Durham) hoards, all in the National Collection. The Westow hoard also comprises two tanged chisels like fig. 6, no. 7, a type that is of frequent occurrence in Britain and Ireland (e. g. in the Broadward hoard), and is, like the knife with ridged tang, found in France.⁴

A domed button, taken from the butt of no. 28, with a bar across the cavity from edge to edge is also in Dr. Corner's series, and has exact parallels in France⁵ and other parts of the Continent. It seems to be a translation into metal of the jet studs with V-shaped perforations of the early Bronze Age, and may be perpetuated in the pyramidal buttons of the Anglo-Saxon period, which are often jewelled.

Beside the five recognized by Dr. Corner, there are thirteen bronzes in the Richmond Free Library that are said to belong to the Broadness hoard, including four ribbed spear-heads and a fragment, three leaf-shaped spear-heads (one with angular socket, as frequent in the European Bronze Age), and a chape $3\frac{1}{2}$ inches

¹ Cf. Evans, fig. 426 (Fulbourn, Cambs.).

² *Iliad*, x. 153.

³ A fragment from a hoard at Dreuil-les-Amiens, Somme (Evans Collection), is figured in *L'Anthropologie*, xii. 287, fig. 2, no. 12.

⁴ Chauvet and George, *Cachette d'objets en bronze à Vénat*: Bulletin de la Société archéologique et historique de la Charente (1894), pl. ix, no. 64; pl. xxii, no. 272.

⁵ Chauvet and George, *op. cit.*, pl. xv. 112; *L'Anthropologie*, xviii. 528.



long with broad concave mouth like that figured in Evans, fig. 368. All the bronzes had a calcareous deposit when found, and fragments of the oak¹ shafts were also recovered, besides a wooden peg.

All these have parallels in British hoards that evidently belong to the end of the Bronze Age, and if not part of the hoard were no doubt contemporary with it and came from the same part of the river. The mineral condition is practically the same throughout, and the inclusion of fragments and damaged pieces suggests that this was scrap metal collected for the purpose of recasting, generally called a founder's hoard, though such usually includes lumps of unshaped metal. It should be noticed also that the finds in Thames Street and in the Thames near Kingston (including fig. 2) both consisted of partly fused weapons in a mass. It may be that we have here traces of the havoc wrought by an invader who wielded iron weapons and put an end to the bronze culture of this region. Before that period came to an end, however, there was evidently a close connexion between the inhabitants of the Thames and Somme valleys, and further research may throw light on the trade relations of Britain about the fifth century before our era.

Dr. Corner's exhibition is specially welcome, as the specimens in the Greenwell Collection can only be represented by photographs; and in conclusion I would tender him my thanks for much information incorporated in this paper on what is one of the most extraordinary hoards in Britain, containing as it does several specimens of a rare type and no contemporary bronze celts or palstaves of any kind. Mr. Arthur Wright kindly sent me a model of the Hatfield Broad Oak spear-head, and I am also indebted to Mr. Albert Barkas, Librarian at Richmond Free Library, for replies to several inquiries, and for access to the small but interesting collection of antiquities under his charge."

Thanks were ordered to be returned for these communications and exhibitions.

ANNIVERSARY.

SATURDAY, 23rd APRIL, 1910.

St. George's Day.

CHARLES HERCULES READ, Esq., LL.D., President,
in the Chair.

Albert Hartshorne, Esq., and Mill Stephenson, Esq., B.A.,
were appointed Scrutators of the Ballot. The Rev. Edward

¹ Kindly determined by Professor Henslow.

Samuel Dewick, M.A., and Alfred Heneage Cocks, Esq. M.A., were also appointed Assistant Scrutators.

The following were admitted Fellows :

Lt.-Col. George William Archer, R.E. (retired), Hon. M.A. Oxon.

Lewis John Upton Way, Esq.

The PRESIDENT then proceeded to deliver the following Address :

“GENTLEMEN,

During the twelvemonth that has passed since I last had the honour of addressing you on St. George's Day, the Society has pursued its way in a useful fashion, unmarked by any events of an extraordinary kind. The meetings, as far as my own observation goes, have been somewhat better attended than has been the case in previous years, and the papers brought before us have been marked rather by an excess of material than the reverse. These are both healthy signs, and I trust that in each respect the state of the Society may be considered normal. When our Treasurer is able to assure us, in addition, that our finances have borne the strain the energies of the Council and Fellows have laid upon them, and I think this to be the case, we may fairly claim that we are in a sound business condition. Another healthy sign is to be found in the fact that we have for the past year an unusually short obituary, only thirteen names in all, while three Fellows are lost to us by resignations, one of whom, Mr. Lewis Day, died a few days ago. The names of those who have died are as follows :

William Thomas Bensly, Esq., LL.D., 1st January, 1910.

Very Rev. Ralph Milburn Blakiston, M.A., 15th May, 1909.

Walter Arthur Copinger, Esq., LL.D., 13th March, 1910.

Valentine Dudley Henry Carey Elwes, Esq., 16th June, 1909.

Sir Frederick Dixon Dixon-Hartland, Bart., 15th November, 1909.

Sir John Henry Johnson, Knt., October, 1909.

Arthur Joseph Munby, Esq., M.A., 29th January, 1910.

William Henry Richardson, Esq., M.A., 30th December, 1909.

Vincent Joseph Robinson, Esq., C.I.E., 21st February, 1910.

George Salting, Esq., 12th December, 1909.

James Ebenezer Saunders, Esq., 24th November, 1909.

John Tolhurst, Esq., 9th October, 1909.

Morgan Stuart Williams, Esq., 13th December, 1909.

The following have resigned :

Lewis Foreman Day, Esq. (since dead, April, 1910).

Flaxman Charles John Spurrell, Esq.

Edmund Wilson, Esq.

Without any question the most notable name in the list is that of Mr. George Salting. It is true that he was not an active Fellow of the Society, but I am sure we all take a wider view of our responsibilities and that our sympathies are not limited to the four walls of these apartments. And in this wider view George Salting was one of the great benefactors of his time and country. I had the privilege of writing a few pages on this subject in another place, a privilege I was glad to seize for its own sake, but more especially to counteract the petty commercial colouring that had been given to his life and acts by sundry of the daily papers. Of some of these journals one would have expected a worthier tone, and a clearer view of their duty to the public, but after all, a notice in a newspaper is the work of one man, and it is no uncommon thing for an obituary notice to pay off old scores.

George Salting was born in 1836, in Australia, and died on 12th December last. His father, of Danish origin, sent him to Eton, but insisted upon his afterwards passing through the University of Sydney. He early inherited a very large fortune, and by association with a circle of men who made the collecting of works of art their hobby, he soon became one of the largest, if one of the most deliberate, buyers in the market. His taste by degrees became of the most catholic kind, and ranged from Chinese bronzes to fine Greek coins, while pictures, works of the Renaissance, and fine drawings of all periods, all had attractions for him. His chambers in St. James' Street soon became far too small to hold his treasures, and the South Kensington Museum was the chosen resting-place of a goodly number of them, while, more recently, pictures were in the same way lent to the National Gallery. The quantity of objects thus gathered together was inconceivably vast, and the general high quality of the individual pieces fully as remarkable. He possessed the very rare combination of a cultured and catholic taste, ample means to gratify it, and a persistent inclination towards the very best of each kind. It has been urged against him that he might have done other things with his wealth, and that is unquestionably the case. But if in our complex civilization we find a man pursuing an end that is not only an innocent one, but is, moreover, useful to the community at large, I think we should thankfully commend him. As is well known, Mr. Salting's excessive deliberation in taking any step was so commonly recognized that on his death great doubts were felt as to whether he had ever

carried out his intention of leaving his collections to the nation, an intention often spoken of to his intimate friends, of whom I think I can claim to be one. This doubt is now happily set at rest, though I have good reason to believe that had his will been of more recent date than 1889 its dispositions would have been slightly changed. But it is a great thing that this noble collection should be for ever a national possession, and that by the condition of the bequest it will always be kept together in one hall of the Victoria and Albert Museum as a worthy and fitting monument of the greatest art collector of our time. Here we can, in time, see it as a whole, as Mr. Salting himself never did.

In Mr. Vincent Joseph Robinson, who died on 21st February last nearly eighty-two years of age, we have a disciple of art of another kind. He was engaged in trade in which oriental wares formed an important part, and gradually came to see that there were virtues in Eastern wares, and particularly those of India, that had escaped the eye of even the cultured public. By careful selection of the best and purest types of design Mr. Robinson was able not only to make a market for good Indian carpets and other products, but what was more important from the national and Indian points of view, to mark the difference between the true and the false in the productions of the Eastern looms. He thus rendered an important service to the empire and at the same time raised the popular taste in oriental wares to a somewhat higher level.

In Mr. Morgan Williams the Society has lost a member of a type that can be ill spared. A cultured gentleman, whose leisure was devoted to antiquarian pursuits, he took great interest in our proceedings. He made a valuable and important collection of ancient armour, a study in which he was a recognized authority, while a genial and obliging temperament placed his great knowledge at the disposal of any true student of the armourer's craft.

Sir Frederick Dixon Hartland will be remembered rather as a politician and a banker than as an antiquary. But he published two useful works, *A Genealogical and Chronological Chart of the Royal Families of Europe* and *A Chronological Dictionary of the Royal Families of Europe*, a second edition of the latter being in preparation at the time of his death. He was good enough to lend us objects for some of our meetings.

The Very Rev. Ralph Milburn Blakiston, Rector of Hadleigh and Dean of Bocking, was a familiar figure at some of our meetings some years ago, and he occasionally took part in our proceedings. He was chiefly known as a great organizer in Church matters under Archbishops Temple and Benson, and in this I believe he showed great capacity and was very generally liked.

Mr. Lewis Day was a comparatively recent Fellow of the

Society, and never took much part in our active work, his own vocation lying in the practice of decorative art, on which he has written some very useful manuals. He was intimately connected with the Arts and Crafts Society, the Art Workers' Guild, and the Society of Arts. He was comparatively young, being only fifty-five at the time of his death, and, as I mentioned before, had resigned his membership quite recently.

Mr. William Henry Richardson was seventy-three years old at his death, and was a very familiar figure in the Society's rooms. At one time a master in Ipswich Grammar School, he became in later life the archaeological contributor to Kelly's Directories. He amassed a very large collection of notes on a number of antiquarian subjects, some of which are to be offered for our acceptance, but he never contributed to our publications.

Dr. William Thomas Bensly, who died at the age of seventy-five, was for forty years Registrar of the Diocese of Norwich, one of the private Secretaries to the Bishop, and Chapter Clerk to the Dean and Chapter. Though the antiquarian work published under his name is not considerable, it would be difficult to speak too highly of his services to the archaeology of his county, and the constant help and encouragement given by him to all who worked at it. His knowledge of the history of the cathedral church and city of Norwich was very extensive.

In my address last year I called attention to the serious difference between the methods of English archaeologists in Egypt and those of our continental rivals, and pointed out how heavily English work was handicapped by the want of co-operation among the various English bodies who were digging there. I have received a great number of letters from persons whose knowledge and experience enable them to judge of this question, and in every case the opinion expressed concurred with mine, namely, that unless a system of collaboration were adopted we should find that England would take the second or third place in Egyptian archaeology. It is only fair to state that one or two of our English explorers did not accept my views; but I hardly expected that they would do so, for they were and are the principal supporters of the individualist or parochial system of digging, and deliberately shut their eyes to the manifest gain to the nation that would follow from united effort. No one who has seen what is going on in this direction in Egypt, however, can feel the slightest doubt as to the final result. Nor, indeed, will they have to wait long to see it; a couple of decades will probably suffice to prove my case, and by that time the change of quasi-political conditions in Egypt will have made it impossible to effect any useful change. To forecast the political state of Egypt in twenty years' time is no easy thing to do, but if the present

omens have any significance at all, they point to an increase in the nationalist feeling among the natives, and a strengthening of the cry of 'Egypt for the Egyptians', and in the end will doubtless come an extension of the regulations forbidding the export of antiquities. We have seen recently this precise development in Cyprus, where England rules in much the same way as in Egypt. There we saw first an unsystematic and uncontrolled search for antiquities, which were dug up like potatoes and packed off for sale in this country or that; then followed an all-too-short period of authorized exploration, producing the most valuable scientific results; and to that succeeds the dog-in-the-manger policy of the veto on export of antiquities, a most fatal policy, whether from the point of view of Cyprus or of scientific archaeology. What has passed into history in Cyprus may well become history in Egypt, and I would urge upon all English societies or other bodies who are exploring in Egypt year by year to give consideration to these facts, and before it is too late to unite their forces and pool their funds to the one worthy end—that England may at least hold her own in this archaeological field.

I was interested to see that in his presidential address to the Egypt Exploration Fund Lord Cromer formulated what amounts to a reply to my criticism of last year on the arrangement by which the head of the Antiquities department shall always be a Frenchman.

'I am aware (he says) that it is held by some whose opinions are entitled to respect that in the course of the negotiations of 1904 Egyptology was to some extent sacrificed to policy. That Egyptology had to be considered in the course of those negotiations I readily admit, and I may add that I make the admission with some regret, for personally I favour the opinion that all matters connected with endeavours to add to the stock of knowledge of the world should be kept wholly outside the domain of politics. But I altogether demur to the statement that the interests of Egyptology were sacrificed. Consider what has happened. At the instance of the French Government, an engagement was taken that the head of the Archaeological Department in Egypt should always be a Frenchman. Was this an excessive demand on the part of the French? I cannot think it was. The French were really the fathers of Egyptology. It surely was not surprising that national pride should have been evoked in maintaining some supremacy in a branch of knowledge rendered illustrious by the names of Champollion, Mariette, and others. Would it not have been, to say the least, ungenerous to deny the validity of this claim at a moment when, in spite of every effort to avoid friction, a proud and sensitive nation was wincing under what they con-

sidered a loss of predominant influence in Egyptian affairs? I think it would have been so, and for my own part I may say that it was real friendship, rather than political necessity, which impelled me to advocate this concession. Nevertheless, had I thought that the essential interests of Egyptology would suffer, I should have withdrawn my advocacy. But in what way can those interests suffer? We have a right to expect two things of the French, and my firm hope and belief is that in neither shall we be disappointed. In the first place we have a right to expect that the head of the Archaeological Department shall be a man well fitted to fill the post, both as regards knowledge of Egyptology and in respect to other qualifications. I do not suppose that France, or, indeed, any other nation, is suffering from what I may call a plethora of Masperos; but although it may be difficult to find any one endowed with the very special qualifications possessed by the very distinguished Director-General of the day, I see no reason to doubt that on his retirement, which I hope is still far distant, his mantle will fall on the worthy shoulders of a countryman trained in his own school of learning, conciliation, and liberal thought. The other thing which we have a right to expect is that there shall be no exclusiveness either in appointments to the Archaeological Department or in the treatment of unofficial explorers—in other words, that the traditions of M. Maspero, or I should rather give him his well-earned English title, Sir Gaston Maspero, shall be continued. I hope and believe that in this respect we shall not be disappointed. Gentlemen, it may perhaps be thought that I am not an impartial witness on this subject, for I frankly confess that I know more of politics than I do of Egyptology.

I am quite willing to give due weight to the opinions of a man of Lord Cromer's standing and experience, but I still think that the direction of the Antiquities department in Egypt should be held by the very best man available, independent of nationality. It is so far fortunate that there is every probability of the department being in the very competent hands of Sir Gaston Maspero for some time to come.

As you are aware, I have thought it advisable to issue a circular to the Fellows and others interested, for the purpose of keeping in their minds the urgent needs of our Research Fund. It may be well to remind the Society that help can be given by them and their friends in several ways. A glance at our accounts will show you that we have a capitalized Research Fund, the income only of which is expended, and we have in addition a special fund for the exploration of Old Sarum, the only work to which the Society is actually committed, though we hope to add to our responsibilities this year by beginning to work at Verulamium, and here

again we shall have a separate fund. Those who desire to help this most useful branch of the Society's work can, if they feel so disposed, subscribe both to the general fund and to the specific excavations. If they wish to increase the general fund only, they can do so either by adding to the capital sum or by contributing towards its income a sum to be expended during the current year. This latter course would leave the Council the option of allocating the contribution to any urgent matter. Another alternative is to contribute to a particular piece of research, such as Old Sarum, if the contributor should feel a special interest in that site. The arguments in favour of either course, apart from the predilection of the donor, may be briefly stated. The general Research Fund is a most useful weapon for the Society to possess, and it ought to be very much larger than it is. Its utility is felt at every meeting of Council where a standing item on the agenda is 'contributions from the Research Fund'. The Council makes quite small grants (for it cannot make large ones) to divers explorations proceeding in various parts of the country under competent supervision, though not entirely under the Society's auspices. These contributions serve a useful purpose in addition to their money value, in advertising the fact that this Society has given its approval of the work, a fact which, I am glad to say, often has great influence in securing local subscriptions. Thus we have a hand in a great deal of useful work for which we pay little, and in addition secure for our publications a valuable record of the progress of research in this country. It will be evident that an income of about £150 cannot go very far in such work, and some increase of the capital of the fund would add much to the usefulness of the Society.

So far as the claims of specific undertakings are concerned, it must not be forgotten that the Society is morally bound to continue the work at Old Sarum, and if the necessary money is not forthcoming, both the Research Fund, and to some extent the general funds of the Society, will be liable to be drawn upon. I hardly think that such drastic measures will be called for, for not only have we the special fund from our Fellows and others interested, but also the local subscriptions. I have great confidence in this combination, and if the Fellows do their share I do not doubt the raising of the necessary five or six hundred pounds that we shall want.

Good and useful work has been done during the year on the two sites in the Society's charge, viz. Silchester and Old Sarum.

The excavation of the whole of the hundred acres within the wall of Silchester having been completed in 1908, operations last year were confined to an investigation of the surrounding

earthworks, and of the ditches and bank that accompany the wall. The full results have yet to be tabulated and compared, but it has already been established that the inner lines of defence are undoubtedly Roman, while the outer earthworks have yielded nothing of that date. Some figured Samian ware, found in a filled-up pond actually underlying the town wall, may help in fixing the date of the wall itself. It is much to be regretted that owing to the refusal of Mr. Benyon, the owner of the land outside the town on the north and east, to allow of any excavations in that direction, it has not been possible to examine the supposed amphitheatre and several other outlying details which would have helped to complete the story of *Calleva Atrebatum*.

Towards the end of last August a beginning was made by Mr. Hope and Lieut.-Col. Hawley upon the site of Old Sarum. The higher and inner earthwork was attacked first, and by the end of October the removal of a huge amount of fallen debris had enabled the explorers to open out the remains of the gatehouse of the Norman castle, and of a curious postern on the opposite site of the bailey, which was defended by a large tower. This tower formed part of a block of buildings nearly 90 feet long and about 20 feet high, which has hitherto been completely covered up. The disclosure of this and some adjoining buildings further north has completely altered the aspect of the place, and if the remains of the great tower, which will be reached next, are preserved to anything like the same extent, a very considerable section of the long-buried Castle of Old Sarum will be recovered to archaeology.

Excavations are now being carried on by a joint committee of our Society and the Sussex Archaeological Society, under the direction of our Fellow, Mr. Harold Sands, at the ruins of the mediaeval castle of Pevensey, which occupy one corner of the walled Roman coast fortress of Anderida. The plan of the twelfth-century keep, of a most unusual and irregular form, has been ascertained, and the area of the inner bailey of the castle searched for traces of domestic buildings. The great gatehouse has been cleared on its inner face, and the basement of the north-west tower of the inner bailey has been partly freed from rubbish, the springing and corbels of a thirteenth-century vault being brought to light in the process. Four large hearths, set against the curtain wall, have been found with fragments of tile paving, and in one case the base stones of the shafts which carried the projecting hoods of the chimneys.

On the south side of the bailey, between the south tower and the postern, the mediaeval curtain wall has been found to be set on a sort of apron of Roman concrete resting on sand: a curious and interesting detail.

The pottery finds have not as yet been numerous, but what seems to be the iron shoe of a portcullis spike has been thrown out in clearing a pit outside the south tower.

One event of the past year can be regarded by the Society as entirely satisfactory. I refer to the appointment of our Secretary, Mr. Peers, to the important post of Inspector of Ancient Monuments. The Society will recall that since the death of General Pitt-Rivers, the first holder of this office, we have made various representations to the Government urging the filling of the post. For official reasons it was not possible to grant our request that an Inspector should be appointed at the time, but I gathered from various interviews with those chiefly responsible that the intention was to comply with our wishes eventually. Meanwhile the current work of the office was performed by Mr. Fitzgerald, an official of the Office of Works, until his death in 1908. Now, however, not only have we an Inspector appointed, but the fact of his being an officer of the Society will save the trouble of our passing resolutions with regard to the duties of his office, as he will be always with us to furnish any explanations that may be called for, and it may be that we shall point out to him from time to time where in our view his duty lies. It is, however, a matter for real satisfaction that an officer of the Society should hold this responsible post, and that he should be a man so thoroughly competent as Mr. Peers.

It is in these days a little apt to be forgotten that it is to my predecessor in this chair, Lord Avebury, that the nation owes the Act of Parliament that created the office of an Inspector of Ancient Monuments. His enthusiasm for the archaeology of remoter times led him to the belief that these remains, many of them unconsidered and too often neglected and in danger of destruction, possessed a value and an interest that constituted them a national asset. Time has shown how true his judgement was, and now when the officer entrusted with their preservation is also one of our body, it is only fitting that we should remember to whom we are indebted for so satisfactory a state of affairs.

Owing to the post of Inspector having been vacant for some years there has been an apparent lethargy in its functions. But I think this lethargy has been only apparent and not real, for in the interval a goodly number of monuments have been added to the schedule under the Act. Here we have to thank the First Commissioner, Mr. Lewis Harcourt, and the indefatigable Secretary, Sir Schomberg McDonnell, both of whom may be said to have left their mark, not only in the matter of ancient monuments, but in the beautifying of our everyday surroundings here in London. For this modern improvement, antiquaries though we

are, we cannot help being grateful. Turning, however, to the ancient monuments, the Society ought to bear in mind that the Act is a purely voluntary one, conferring no compulsory powers on the Government, and that the transfer of any monument to the custody of the Government Inspector depends entirely on the goodwill of the owner. Such a provision is entirely in accordance with the spirit that has hitherto governed all our legislation, and it is probably a sound and healthy method. But it provides for us, the Society of Antiquaries, both as a corporation and in our individual capacities as Fellows, the opportunity now and again to bring our influence to bear upon owners of such monuments to persuade them of the propriety of making over their possessions to the custody of the State. As a rule such remains are only held by individuals from purely sentimental motives, and the handing of them over makes the owner no poorer and, in our view, the State greatly richer.

There is one monument in this country, unequalled in the whole world, that of all others should be the property of the State, and I trust that I may have the pleasure of seeing it so handed over while I am still in this world. I mean, of course, Stonehenge. Some years ago I made one effort to secure it, and it might have succeeded but for the ill-advised action of a most excellent and well-meaning public character, who publicly stated that the owner of Stonehenge had nothing to sell, as the public had the right of access and that was all the nation wanted. My own opinion is that the nation ought to have a good deal more than this; but in any case the Courts of Law decided that the public had no right of access, and so like many another well-meaning person, the gentleman to whom I have alluded did only harm and not good, while the chance of Stonehenge being placed under the Ancient Monuments Act or becoming national property was postponed for another couple of decades. At this present moment, however, there is in the market an ancient building that should certainly be secured if possible for the nation. This is Tattershall Castle, the finest mediæval brick building in the country, and it is sad to think that in a country so small as this England of ours there should be a chance of so important a building getting into the wrong hands and perhaps being restored or altered out of recognition.

From the Inspectorship of Ancient Monuments it is natural that we should turn to the Commission for dealing with the monuments themselves. In my last address I explained that the Council had decided to give the English Commission any help that lay in its power, and since that time our relations have been of an intimate and thoroughly friendly character. The Commission has been busily occupied. I am informed that the survey of

Hertfordshire, the county first started, has been completed, and that a beginning has been made with Bucks., and I am glad to be able to report that the work is being done with a thoroughness entirely worthy of the subject, and I trust that in no long time we may see a report well illustrated with plans and photographs that will be a complete justification of the appointment of such a Commission.

In dealing last year with the working of the Ancient Monuments Commission I referred to the belief then prevalent that the Victoria County History was in a moribund state, though there was a slight hope of its revival. It is with sincere gratification that I am now able to announce that the grave problem of finance has been solved, the work is going on, and there is every prospect of the series being continued as devised by the original authors. I feel sure the Fellows will concur with me in thinking this an important and gratifying piece of news.

There is a small defect in our working constitution that I think might be usefully amended. I refer to the fact that the acts of the Council in anything indirectly affecting the Society at large are not as a matter of course communicated to the Society. A case in point has recently occurred. It was reported to the Council that great advantage would accrue to us all by the appointment of another Standing Committee, whose office it should be to see to the efficient and prompt publication of the material brought before our meetings, an Editorial Committee in fact. The Council was fortunate in finding two competent and energetic Fellows who were willing to give themselves to this work, Mr. Page and Mr. Reginald Smith, and they, with the officers, have taken this responsibility upon them. Their first duty was to go thoroughly into the contracts in existence for the producing of our publications, printing, block-making, photographing, and all the different factors that go to the making of the modern book. They obtained estimates for these matters from firms of high standing and compared them with our existing contracts. Naturally much was found in which small improvements could be effected, but their principal discovery is little short of astounding. It was clearly shown that we had been habitually paying 40 per cent. more than was necessary for our printing bill. There is an explanation for this, though I confess it is hardly a satisfactory one. It must be remembered that we have been in the habit of employing the same printers, Messrs. Nichols, for no less a period than eighty years, and that during the last twenty or thirty years a complete change has taken place in the internal economy of all printing houses. Eighty years ago I dare say it was quite immaterial whether printing was executed in London

or in the country, though doubtless the London work was better. Now the economic condition of the trade is entirely changed and, as I understand, it is practically impossible for the London firms to compete with those having establishments in the country, at any rate for work of the kind we require. The Society has been eminently conservative in its methods, no doubt a sound policy in the main, but I myself think that the time has come when we might make a change. I mention these facts, partly for their own interest and partly because I wish to warn the Fellows that when they get their next part of *Archæologia* they will find a very different-looking volume from that to which they have always been accustomed. The type used has been changed and the size of the forme also, so that not only have we now a more agreeable fount of type to read, but as there is a good deal more matter in each page, the volumes will be more condensed. That these are improvements I am sure. What other changes for the better there may be I leave the Society to find out for itself, but I venture to think that, whatever these may be, the Society even now owes a considerable debt to the Editorial Committee for the good work it has already done.

The Society at large felt probably as much surprise as did the Council at the announcement that Mr. Hope, who has been our Assistant Secretary for twenty-five years, wished to retire from his post. To most of us such a position would seem to be nearly the ideal of any one with antiquarian tastes; to deal every day with archaeological matters, to be able to devote oneself for some months in the year to field work of one kind or another, and to have under one's roof a library in which the results of such work can be reduced into the order necessary for publication; such conditions are not often to be found. However, Mr. Hope states that after his twenty-five years of service he finds the routine work of the Society irksome, and desires to be relieved of it, in order that he may devote himself with greater freedom to excavation, and in particular, as I understand, to the research that is the natural field of our Research Fund. I trust that in this the means at our disposal will allow of both Mr. Hope and other workers having free scope for all the energy and time that they can bestow upon it.

The Society owes a good deal to Mr. Hope. In the branches of archaeology in which he has specialized he has from time to time rendered us good service, both in giving advice on occasion for the information of the Council, and in the various missions on behalf of the Society with which he has been entrusted; while the pages of our publications bear witness to the industry he has shown in bringing before us matters in which we might be expected to take an interest. For all this we thank him, and on the other hand, in taking leave of him as an official of the Society,

we are entitled to say, on our own behalf, that we have treated him well. I have a clear recollection of what happened on some occasion when the question of raising the salaries of the officers of the British Museum was brought before Mr. Gladstone. He immediately replied that their work was of so pleasant a kind that they ought to be glad to be allowed to do it for nothing. The observation might be applied with equal truth to the post of Assistant Secretary to this Society. Mr. Hope retires at what is considered in some circles to be the prime of life, and, subject to the consent of the Society, with a retiring allowance on more generous lines than if he had been a member of the Civil Service. It is my intention, if I have the opportunity, to propose to the new Council that he shall have the privilege of attending our meetings whenever he may feel so disposed, and shall receive our publications as they appear, privileges which I feel sure the Society will endorse and Mr. Hope appreciate. I trust that as often as his own work will permit we may have the pleasure of seeing him here, and that he will, as heretofore, give us the benefit of his special knowledge.

I may mention here, for the information of the Society, that the Council has appointed a Committee to select a successor in the post for the approval of the Council, and to define the duties and other responsibilities of the new holder of the office. In a quarter of a century times have changed and the needs and duties of the Society with them, and it is probable that some alterations will be necessary in the functions of our Assistant Secretary.

One of these possible changes I only mention now, because other possibilities depend upon it. During the whole of the time that the Society has been in these rooms, the Secretary or Assistant Secretary has been resident, and a large part of the available space has been given up for such occupation. The plan no doubt originated in the idea that such residence meant greater security for the Society's property. Now, however, the contrary view is held, with some reason, and it is thought that private residences in the same building as a public collection are rather a source of danger than of security. However this may be, I think it probable that the new Assistant Secretary will not have any living-rooms given to him, principally for the reason that we want more room for the Society's own use. Our library, for one thing, grows at a considerable pace, and the books must of necessity be in rooms to which the Fellows can have access. In addition to this very cogent reason, the prospect of the residential part of our house becoming vacant revives in my mind a scheme that was considered years ago and then rejected owing to the narrowness of our accommodation. This scheme I mentioned in another connexion in my address last year, and I may now call it a Federation of Archaeological Societies.

As you know, we have for many years past allowed other societies to have the use of our meeting-room, a practice that has been much appreciated, without interfering with our own functions. The British Academy habitually held its meetings under our roof for some time, and other bodies have made occasional use of our hospitality. Recently, however, the Archaeological Institute approached the Council to be allowed to hold its ordinary meetings in our room, and the British Academy is desirous of returning to us, and, I understand, would like a room assigned to it for its secretariat; of course upon terms to be arranged. These requests are no doubt typical of many that we should receive, if it were once known that we were willing to entertain them, and I should like the Society to consider the matter at leisure. Like most other alternatives, there are advantages on both sides, and it is not easy, perhaps, to decide which way our duty lies. On the one hand, there is undoubtedly a great waste of energy in archaeological work as managed in this country, owing to the absence of any common plan of action agreed upon by the various societies conducting it, and there is great waste of money in the hiring of rooms for their meetings and other operations, and this money is lost to research or publication. It is conceivable that some of these disadvantages would be minimized or removed if the administration of the chief among them, at any rate, were to be conducted under the same roof. On the other hand, we must look ahead ourselves. A time will certainly come when all the space available in these apartments will be wanted for the Society's property or for its work, and we can, if need be, put them to some use now.

For instance, it constantly occurs that objects are entrusted to us for publication, and that many of these are of such rarity and value that it is not possible to let them go from our rooms for photographing. Photographs therefore have to be made under very difficult conditions in one of the rooms of the Society. In addition it may not be generally known that Mr. Clinch makes a photograph of every object that is sent to us for exhibition, and these prints form a valuable record in illustration of our publications. It would obviously be a great convenience to have a properly equipped studio for these purposes, and there is no doubt that one or other of the residential rooms could be adapted to this purpose. Another advantageous change might be made in the proper housing and display of what we call our museum. Its present condition does not call for much enthusiasm, and it may be that if the scattered collections were brought together in one room and properly displayed, such a new arrangement might provide more justification for our possessing such collections than is seen in their present somewhat forlorn condition.

A third means of utilizing our additional space in a practical way will doubtless soon be found in providing additional storage for our various unseen property. In addition to the stock in hand of our publications, no inconsiderable bulk, we have other effects in the form of the blocks that have been used in illustrating our publications, and we have already a very large series of lantern-slides, a series that will assuredly increase. To be of use such stores must be kept in order and be easy to find when wanted, and room is necessary for their adequate storage.

When these claims for our own needs are taken into consideration, and in addition some allowance is made for possibilities in the future of which we know nothing, it would certainly seem that even with the residential portion of our apartments added to what we at present use, in a short time from now we shall have none too much room for the necessary work of the Society.

It may have occurred to some Fellows of the Society that it is somewhat singular that whereas the Royal Society and several other of the chartered societies have the privilege of presenting to suitable recipients royal medals as a recognition of their public services, the Society of Antiquaries possesses no such means of distinguishing merit in its own special branch of learning. The lack of a royal medal is, however, not due to any want of royal appreciation. For in the year 1830 the King was pleased to order, on the application of the President, that two gold medals should be annually given to the Council and presented by it to such persons as it might think proper. It seems to us now more than singular that such a mark of royal favour should have been rejected, and by its rejection an opportunity lost of encouraging the workers in the very unremunerative field of archaeology; but so it was. It appears from our minutes that the discussion as to the fitting persons to receive the medals was so acrimonious that it was considered best in the interests of the Society that the medals should not be accepted from the King, and thus our Society alone, among what may be called the royal societies, has no medals to bestow. Some time ago, in reading the account of this and many other sins of the Society in a fierce diatribe by Harris Nicolas, entitled 'Observations on the State of Historical Literature', in which the author falls foul of the Royal Society, our own, the Keeper of the Public Records, and other institutions, I was led to think whether we could not revive the giving of a medal, but in a somewhat different form. For many years past I have had accidental relations with one or other of our universities with regard to the teaching of particular subjects in which I was personally interested. As is well known, our own branch of learning, archaeology, now has a definite standing in all universities, and in some of them

the subject is specialized so as to provide more than one archaeological chair, and in addition there are many university prizes, scholarships, and the like which are the natural outcome of the recognition of archaeology as a specific subject of study. These facts, which I do not bring before you as novelties, but only to emphasize my argument, again led me to consider whether we should not, as a matter of duty, endeavour to make our relations with university teaching more intimate and useful than they have been hitherto. Our habit has been to confine our energies to our own sphere of action, our particular branches of research, the reading of papers, and the publication of one and the other. We have hardly ever looked outside and taken note of how the subject for which we exist is being treated by other bodies who have entered the field later than ourselves. We take no account of the scientifically trained archaeologists who are annually turned into our midst, though in many cases the men who have trained them are members of our own body. It is a mere chance if any one of these young men, fresh from their triumphs in archaeology at Oxford or Cambridge, or perhaps from even more classical lands, offers himself as a candidate for our suffrages. I need not describe to you the method by which our members are recruited, nor do I at this moment intend to criticize it. But it will be readily admitted that the method is in the main one of co-optation, and that the whole proceeding from beginning to end is of the most accidental character. I make no objection to such a line of action so long as it furnishes for our list of Fellows a sufficient and adequate number of members who have had an archaeological training. By the accidental method we may continue to do this, as I think indeed we have done up to the present. But I confess I should like to see the Society take some steps to ensure that training and knowledge on the part of a certain proportion of its members upon which its stability, its reputation, and its successful continuance must depend.

Now after this preamble, it may be thought that I am about to propose some drastic change, say, for example, in the procedure at our elections. While in my judgement that procedure falls very far short of perfection, it is by no means my intention to deal with it now. My purpose is much more simple, and if carried out, its effect would be very gradual and, I think, beneficent and eminently useful for the Society. It is only that we should make an endeavour to enter into more definite and intimate relations with one or more of the Universities, that we should recognize in a practical form the fact that the subjects in which we are interested are taught in these Universities, and that we should encourage the study of archaeology by the bestowal of a medal upon a candidate who has been successful in some pre-determined course

of study. I have taken counsel in this matter, and I believe there would not only be no difficulty in making the necessary arrangements, but that such a prize as the 'Antiquaries' Medal' would be extremely popular, and I think that it would be well within the financial possibilities of the Society. If the Council should think well of the scheme it would have to decide which University should be approached in the matter, and here I would suggest, as the least invidious course, that the London University would perhaps be the most fitting. Further, in order to make the prize of real practical value to a young man at the outset of his career, the medal, which might well be of bronze, should be accompanied by a gift of books to a given value.

It may be asked what relation this scheme has to the recruiting of the ranks of the Society. The relation is certainly not close, but, as I have said elsewhere, the Society must look ahead to some extent, and the young men will doubtless become older, and the winners of the Antiquaries' medals are not unlikely to remember that the Society took enough interest in their early career to justify their maturer work being offered for its acceptance.

I feel sure, at any rate, that such a scheme would be ultimately of great value to the Society. The tendency in such a body as ours is perhaps too strongly in the direction of aloofness from the living world to which a great many of us belong. We have to make no struggle for existence, our means are amply sufficient for our own parochial needs without any appeal to an outside public, and, except for our very healthy vitality, as shown in such extra undertakings as the excavation of Silchester or Old Sarum, we might live 'the world forgetting, by the world forgot'.

I sincerely trust that we shall always have some such occasional bond with the outer world as Old Sarum provides, but I do think also that a healthy and useful connexion not only with the outer world but with the younger part of it, would give us a continued vitality and enable that same outer world to realize that archaeology is really a scientific and living study.

In conclusion, I take great pleasure in tendering my warm thanks to the officers of the Society, who have given me their loyal support during the year."

The following Resolution was thereupon proposed by John Henry Etherington Smith, Esq., M.A., seconded by Henry Benjamin Wheatley, Esq., and carried unanimously:

"That the best thanks of the Meeting be given to the President for his Address, and that he be requested to allow it to be printed."

The President signified his assent.

The Scrutators having reported which Members of Council in Balloting Papers no. I and no. II, and that the Officers of the Society in Balloting Paper no. III, had been duly elected, the following list was read from the Chair of those who had been elected as Council and Officers for the ensuing year:

Eleven Members from the Old Council.

Charles Hercules Read, Esq., LL.D., *President*.
 Philip Norman, Esq., LL.D., *Treasurer*.
 Sir Edward William Brabrook, Knt., C.B., *Director*.
 Charles Reed Peers, Esq., M.A., *Secretary*.
 Leland Lewis Duncan, Esq., M.V.O.
 Arthur John Evans, Esq., M.A., Litt.D., F.R.S.
 William Gowland, Esq., F.R.S.
 Sir Henry Churchill Maxwell Lyte, K.C.B., M.A.
 Horace William Sandars, Esq.
 John Henry Etherington Smith, Esq., M.A.
 Henry Beauchamp Walters, Esq., M.A.

Ten Members of the New Council.

Charles Angell Bradford, Esq.
 The Right Rev. George Forrest, Bishop of Bristol, D.D.,
 D.C.L.
 Philip William Poole Carlyon-Britton, Esq.
 Alfred Heneage Cocks, Esq., M.A.
 William Dale, Esq.
 Francis John Haverfield, Esq., M.A., LL.D.
 Willoughby Aston Littledale, Esq., M.A.
 William Howard Aymer Vallance, Esq., M.A.
 Edward Prioleau Warren, Esq.
 Henry Benjamin Wheatley, Esq.

Thanks were voted to the Scrutators and Assistant Scrutators for their trouble.

THURSDAY, 28th APRIL, 1910.

CHARLES H. READ, Esq., LL.D., President, in the Chair.

The following gifts were announced, and thanks for the same ordered to be returned to the donors:

From the Author:—Legal practice in Ayr and the West of Scotland in the fifteenth and sixteenth centuries. By David Murray, LL.D., F.S.A. 8vo. Glasgow, 1910.

From Lord Avebury, P.C., F.S.A.:—Putnam anniversary volume. Anthropological essays presented to Frederic Ward Putnam, 1909. 4to. New York, 1909.

From the Author:—The rood-screen of Moulton Church, Lincolnshire.
By Aymer Vallance, F.S.A. 8vo. London, 1910.

Lt.-Col. William Hawley was admitted Fellow.

The PRESIDENT announced that he had appointed Sir Henry Churchill Maxwell Lyte, K.C.B., M.A., and Francis John Haverfield, Esq., M.A., LL.D., to be Vice-Presidents of the Society.

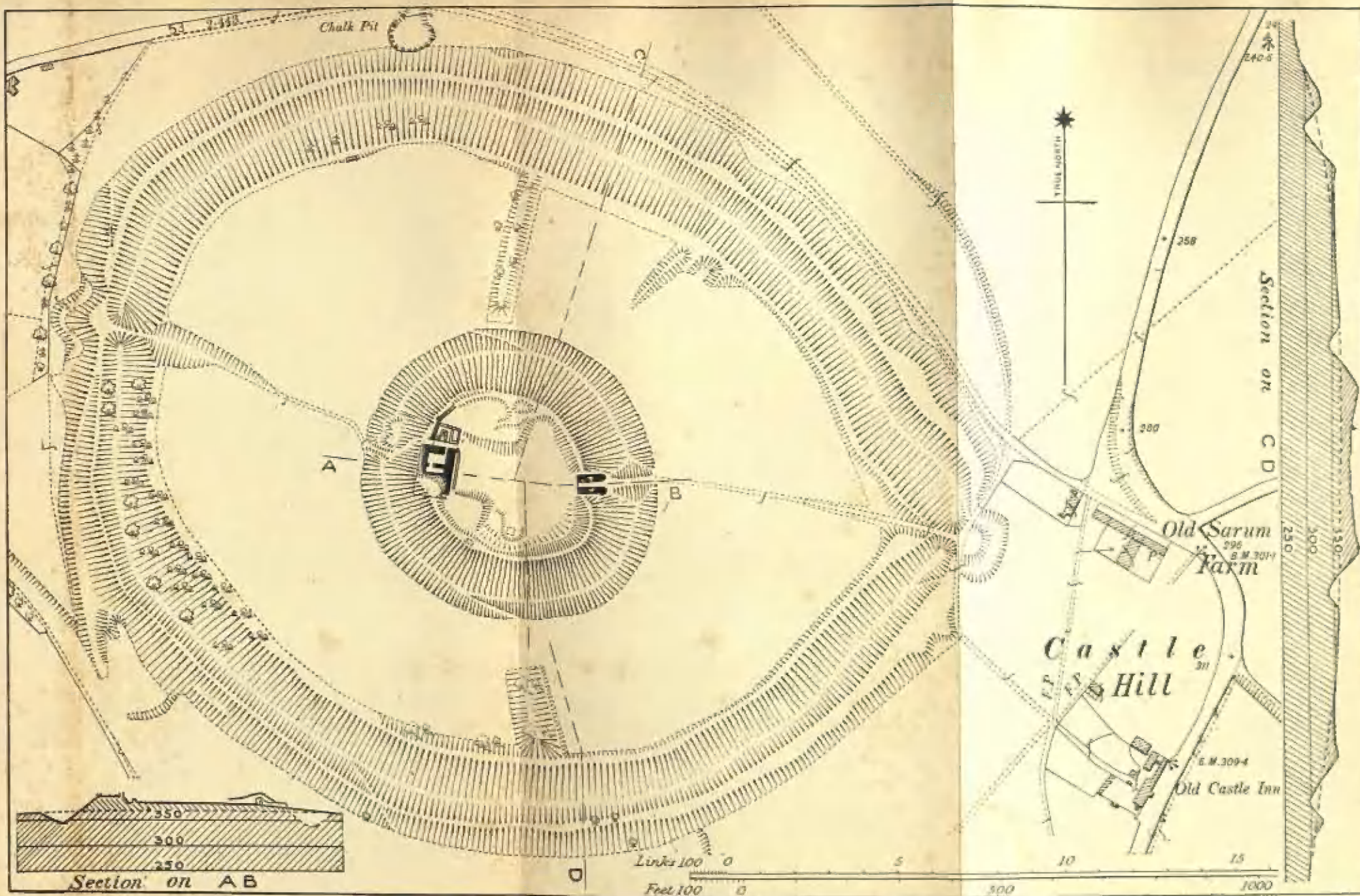
W. H. ST. JOHN HOPE, Esq., M.A., Assistant Secretary, read the following Report of the Committee for excavations at Old Sarum during the past season.

“Before submitting to the Society on behalf of Lt.-Col. Hawley and myself an account of the excavations carried out on the site of Old Sarum under our direction in 1909, it is desirable to say a few words about the place committed to our charge.

The most noteworthy feature of Old Sarum is the large and imposing earthwork of which it chiefly consists, standing about $1\frac{1}{4}$ mile due north of Salisbury, by the side of the road to Amesbury. This road cuts off the hill of Old Sarum from the high ground to the east, of which it forms an outlier. The top of the hill is an irregular oval of considerable size, which has been fortified by encircling it with a wide and deep ditch. Some of the material from this has been cast up on the inner side, but at least as much was likewise thrown outwards so as to raise the counterscarp and make the ditch more formidable. The amount of the outthrow is excellently shown at one point on the north, where a chalk pit has been cut into the side of the hill. The lower part of the pit gives a good section of the natural chalk, but the upper part shows as clearly the excavated material from the ditch, and the outer edge of this can easily be traced for a considerable distance north and south of the pit along the slope of the natural hill.¹ The outer ditch was probably continuous originally, but is now interrupted on the east and west by filled-in causeways crossing it to the entrances into the enclosed area. Each entrance is also defended by an outer hornwork or barbican exterior to the main ditch, but protected by an independent ditch of its own. Whether these outworks are contemporary or in later times were strengthened by masonry has yet to be tested. The bank forming the scarp of the ditch was certainly crested by a massive wall, but only one fragment is now left standing above ground.

In the middle of this greater earthwork stands a smaller and

¹ We are indebted to the Rev. G. H. Engleheart, M.A., F.S.A. for calling our attention to this.



PLAN OF OLD SARUM, BASED ON THE 1860 O.S. MAP, WITH SECTIONS.

nearly circular one, which has been constructed somewhat differently from the outer ring, in that all the contents of its deep and wide ditch have been thrown inwards. A good deal of the material seems to have been used to raise the level inside, but enough was also left to encircle the area by a lofty bank, within and upon which stood the buildings of the Castle of Sarum.

Of the beginnings of Old Sarum nothing is known. The outer earthwork is apparently pre-Roman, and may be of the early Iron Age or even earlier. This is, however, a point that cannot be settled until the bank and especially its ditch have been scientifically examined. As regards historic times, there are good reasons for identifying Sarum with the Roman station of *Sorbidunum* of the 12th and 15th Antonine Itineraries, but nothing at present is known about it. Part of a quern of Andernach trachyte, portions of undoubted Roman tiles, and pieces of painted wall-plaster, discovered during our excavations, are proof of Roman occupation, the nature and extent of which have yet to be tested.

Sarum seems to have been a place of some note in Saxon times, coins of Cnut and Edward the Confessor being known which are believed to have been struck there. The importance of the site is also shown by the fact that the seat of the bishopric of Sherborne was moved thither by Bishop Herman in accordance with the edict of the Council of London of 1075, which directed the transfer of episcopal sees from villas to more populous places.

Sarum is apparently identical with the 'Sarisberie' of the Domesday Survey, but this does not include any description of or reference to the place, probably because it was then in the King's hands. There can be little doubt that the smaller earthwork was thrown up immediately after the Norman Conquest as the stronghold of a castle, of which it formed the inner bailey. At the same time the outer area was probably subdivided into an eastern and a western section by two transverse ditches extending from the inner ditch to the outer bank. The eastern section perhaps formed the outer bailey of the castle, and the western half, at any rate as to its northern part, was the bishop's precinct and contained the cathedral church. This was the work of Bishop Herman's successor, Osmund (1078-99), and was hallowed in 1092. The foundations can still be traced in the turf after a prolonged drought, and during the autumn of 1835 they were sufficiently uncovered to show that the church was cruciform in plan, and about 270 feet long. Its remains will be carefully explored in due course.

The castle area was probably defended at first, as was usual, by timber palisades disposed along the crests of the outer banks, and continued from those of the transverse ditches down into the

inner ditch and up the steep scarp of the inner bailey so as to form unbroken lines of defence.

When the wooden ramparts began to be replaced by walls of masonry is not recorded. The 'Annals of Winchester' ascribe the building of the Castle of Sarum to Bishop Roger, who was elected in 1103, but not consecrated until 1107. As the *Turris* or great tower is mentioned in the Pipe Roll for 1130-1¹ it could well have been Bishop Roger's work, since he lived on until 1139. But as it stood within the bailey, and not on the encircling bank, the latter may have continued to carry its original timbering until later than the building of the tower. The considerable sum of £24 4s. 10d. was spent upon the bridge and castle in 1170-1, and among the charges in 1172-3, when £17 4s. were laid out on the works of the castle, is one of 61s. 'for making rubble (*attractum*) to enclose the great bailey of the Castle'. A chain and other ironwork for the bridge and a great cord for the castle well were bought the same year. Other large sums laid out on the castle are entered on the Pipe Rolls for 1173-4 (£27 5s. 5d.), 1175-6 (£33 1s. 5d.), and 1176-7 (£61 1s. 1d.). In 1181-2 £9 1s. were spent on the treasure-house within the tower, and 66s. 9d. for the iron-bound hutches to hold the treasure itself; £6 7s. 3d. were also laid out upon the gaol this year. In 1187-8 £26 1s. were expended on the chamber over the castle gate and on the repair of the tower. A great hutch to put treasure in was also bought for 26s.

From certain orders to the sheriff of Wilts entered on the Liberate Rolls about the middle of the thirteenth century it is possible to get some idea of the topography of the castle. Thus on 8th July, 1246, the sheriff is bidden to cause to be repaired, where necessary, the great tower in the King's Castle of Sarum, the tower above the kitchen, Herlewin tower, the tower above the great gate, and the great gate itself, likewise the great hall of the same castle, the *camera* or lodging above the King's garderobe, the tower above the postern and the bridge of the same postern. The cloister between the hall and the great chamber was likewise to be made anew, and a lamp to be kept burning by day and night in the chapel of the blessed Nicholas. The sheriff was further to find two chaplains to serve in the chapel of St. Margaret within the castle, and another in 'the chapel of the Blessed Mary in the same Castle where the bishop's seat was wont to be'.

On 4th December, 1246, the sheriff was directed that inasmuch as the body of the church of the Holy Cross above the great gate of the outer bailey of the King's Castle of Sarum threatened

¹ 'In .j. ostio faciendo ad Cellarium Turris Sar. xx.s.'

to become a ruin, it was to be taken down and another body of the church made anew.

On 11th April, 1247, a certain house was ordered to be made above the castle well, and a certain wheel to draw water.

On 22nd December, 1247, the sheriff was bidden by the King to cause 'our two kitchens within our Castle of Sarum to be repaired and covered with shingle, and our new hall within the same Castle' to be mended and repaired, and likewise the other houses where they needed it; 'our gaol' within the outer bailey was also to be repaired.

These entries, which it is needless now to multiply, enumerate a considerable number of buildings, the sites and remains of which ought to come to light during our excavations.

The reference to the chapel 'where the bishop's seat was wont to be' is connected with the removal of the ecclesiastical establishment from its elevated position on the castle hill of Old Sarum to the lower site in the valley below. The reasons for this are duly set forth in the mandate of Pope Honorius III. to the papal legate, dated 18th April, 1217, to inquire and report on a petition of the dean and chapter of Salisbury, and are sufficiently interesting to be quoted in full.

'They state that the cathedral church, being within the line of defence, is subject to so many inconveniences, that the canons can not live there without danger to life.

Being in a raised place, the continual gusts of wind make such a noise that the clerks can hardly hear one another sing, and the place is so rheumatic by reason of the wind that they very often suffer in health.

The church, they say, is so shaken by wind and storm that it daily needs repair: and the site is without trees and grass, and being of chalk has such a glare that many of the clerks have lost their sight.

Water, they say, is only to be got from a distance, and often at a price that, elsewhere, would buy enough for the whole district.

If the clerks have occasion to go in and out on business, they can not do so without leave of the castellan, so that on Ash Wednesday, Holy Thursday, and on synodal and ordination and other solemn days, the faithful who wish to visit the church can not do so, the keepers of the castle declaring that the defences would be endangered.

Moreover, as many of the clerks have no dwellings there, they have to hire them from the soldiers, so that few are found willing or able to reside on the spot.'¹

¹ *Calendar of Papal Registers. Papal Letters*, I. 1108-1304, p. 46.
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The foundation of the new church of Salisbury was laid on 28th April, 1220, and the translation from Old Sarum 'de castro nostro Saerisbiriae ad locum inferiorem factam' was approved by King Henry III. by charter of 30th July, 1227.

In 1331 King Edward III., by charter dated 16th December, granted to the dean and chapter licence 'to have of our gift all the stone walls of the former cathedral church of Old Sarum, and of the houses that were formerly those of the bishop and canons of the same church, within our Castle of Old Sarum, for the repair of their church of New Sarum and the enclosure of the precinct of the same church, so that the aforesaid bishop, dean, and chapter, may drag out the stone and cement from the aforesaid walls and carry them whither they will'. Leave was also given to the dean and chapter to build anew in any other place within the castle a certain chantry in the old church which they were bound to maintain. This was the chapel of the Blessed Mary referred to in the Liberate Roll of 1246.

The Castle of Old Sarum seems to have been kept in repair throughout the fourteenth century, but with the invention of artillery and the changed condition of things, it eventually became useless as a defensive work, and in 1446-7, when it was granted by letters patent of 17th March to Sir John Stourton, treasurer of the household, it was described as 'now fallen into decay so that no yearly rent thereof is answered for to the King'.¹

Lastly there is the description given by John Leland in his *Itinerary* of his visit to the site about 1535:

The cite of Old-Saresbyri standing on an hille is distant from the new a mile by north weste, and is in cumpace half a mile and more.

This thing hath beene auncient and exceeding strong: but syns the building of New-Saresbyri it went totally to ruine.

Sum think that lak of water caussid the inhabitantes to relinquish the place; yet wer ther many welles of swete water.

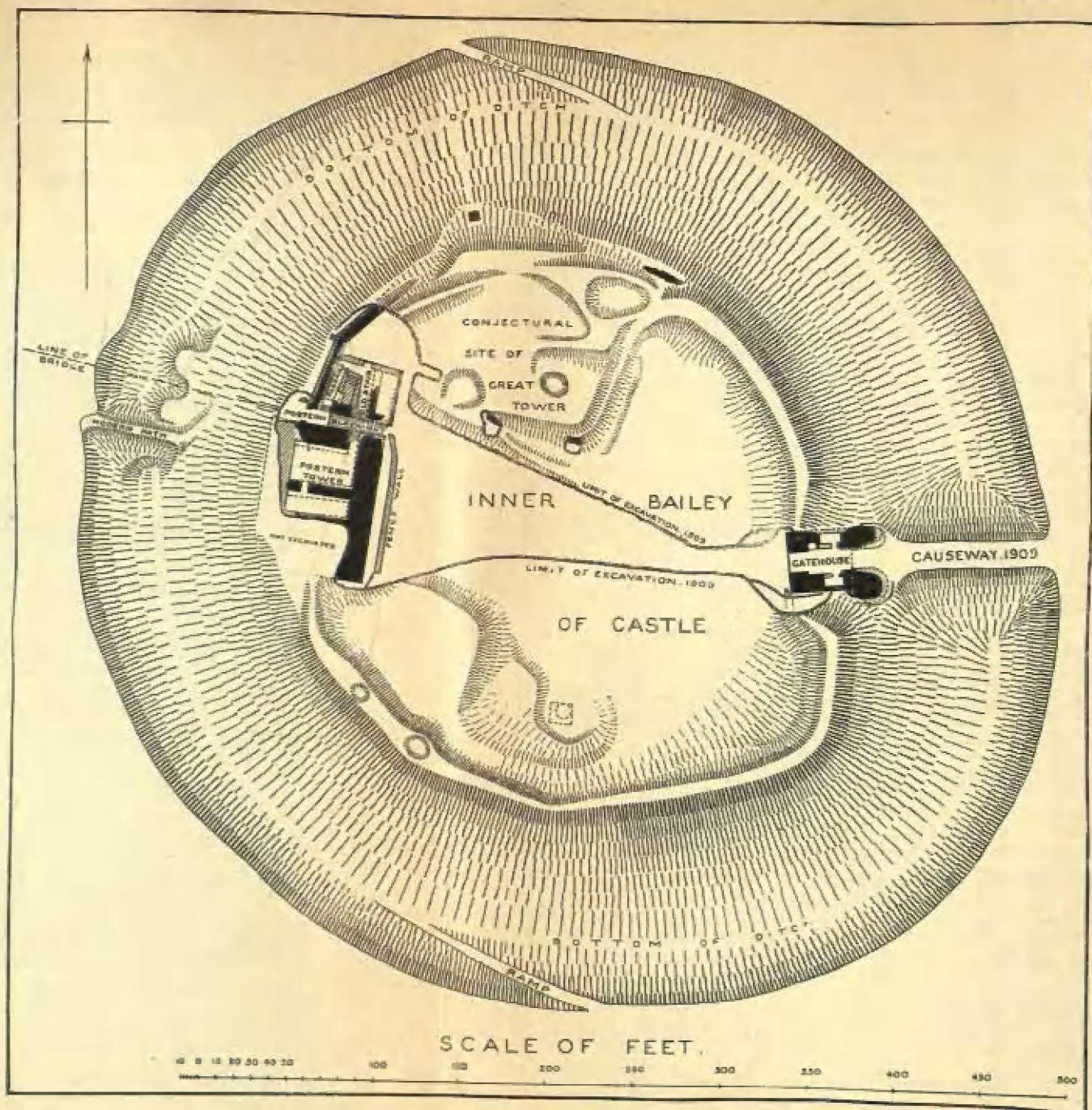
Sum say, that after that in tyme of civile warres that castelles and waulid townes wer kept that the castellanes of Old-Saresbyri and the chanons could not agre, insomuch that the castellanes upon a tyme prohibited them cumming home from Procession and Rogation to re-entre the town. Wherupon the bisshop and they consulting together at the last began a chirch on [his altered to] their own propre soyle: and then the people resorted strait to New-Saresbyri and buiddid ther: and then in continuance were a gr[ea]t numbre of the houses of Old-Sares[byri] pullid down and set up at New-Saresbyri.

Osmund Erle of Dorchestre and after Bisshop of Saresbyri erectid his cathedrale chirch ther in the west part of the town: and also his palace. Wherof now no token is but only a chapelle of Our Lady yet standing and mainteynid.

Ther was a paroch of the Holy Rode beside in Old-Saresbyri: and an other over the est gate wherof yet sum tokens remayne.

I do not perceyve that there were any mo gates in Old-Saresbyri then 2.

¹ Patent Roll 25 Henry VI. part I, m. 3 (*Calendar*, p. 35).



one by est, and an other by west. Withoute eeche of these gates was a fair suburbe. And yu the est suburbe was a puroch church of S. John : and ther yet is a chapelle standinge.

The ryver is a good quarter of a mile from Old-Saresbyri and more where it is nerest onto it, and that is at Stratford village, south from it.

Ther hath beene houses in tyme of mynd inhabitid in the est suburbe of Old-Saresbyri : but [now] ther is not one house nother [with]in Old-Saresbyri or without in[habit]ed.

Ther was a right fair and strong castelle within Old-Saresbyri longging to the Erles of Saresbyri especially the Longespees.

I reede that one Gualternus was the first Erle after the conquest of it.

Much notable ruinous building of this castelle yet ther remaynith.

The dicke that environid the old toun was a very deepe and strong thyng.

A place with such a history and so early an ending cannot fail to give interesting results if scientifically excavated, and a formal arrangement has been made between the Society of Antiquaries on the one part, and the Dean and Chapter of Salisbury (owners), the Ecclesiastical Commissioners (lessees), and their tenant, Mr. Carey, on the other part, for the carrying into effect of a proper examination of the site, the approval of H.M. Office of Works, under whose control Old Sarum has been placed in accordance with the Ancient Monuments Act, having previously been obtained.

The excavations of 1909 were begun on Monday, 23rd August, and continued until Saturday, 6th November, a period of eleven weeks, under the direction and supervision of Lt.-Col. Hawley and myself.

It had previously been decided to deal first with the inner and higher enclosure, as more likely to yield tangible results, and it was upon this accordingly that operations were begun. It was approachable from the outer work only by a low causeway across the ditch on the east, which probably represents an ancient bridge. This causeway was largely encumbered with bushes and creepers, such as also filled the ditch itself, and covered the outer slope of the inner bank. The first business was therefore to clear a way across the causeway to the breach in the castle bank which indicated the site of the gate-house. We were next able to deal with the gate-house itself, of which some rough rubble coring was still standing on either hand. The passage through it was accordingly attacked, and gradually cleared of the fallen masses and rubbish that filled it to a depth of about 8 feet. In view of future contingencies the debris was utilized to raise the level of the causeway.

After the passage was opened out it was possible to examine the gate-house more in detail. Only the lower part of the ground story was left, and this had been so systematically denuded of its original ashlar facing that little else than the massive core of flint rubble was left.

The entrance was flanked by two drum towers, from which all the ashlar has been stripped, and consisted of one wide archway, probably of some 9 feet span. Its stones had all, however, been removed and the place of it was indicated only by the huge square hole, 11 inches wide, and originally 12 feet 10½ inches deep, for its drawbar, which fortunately remains on the south side. From the line of the arch the wall that contained it extended backwards about 6½ feet. Here the passage widened out to form a hall 19 feet long and about 14 feet broad. The axis of the hall is not quite in line with that of the entrance, being set further to the south, so as to form a recess on that side, 1 foot 8 inches deep, which originally contained a stone bench. On the north side the corresponding recess was only 6½ inches deep. Opening out of the gate-hall on either side of its eastern end were two small doorways, into as many guard-chambers. That on the south side was 12¼ feet long and 5½ feet wide, and fortunately retained much of its ashlar facing, together with part of the springing at each end of its barrel vault, at a height of 6 feet from the floor. In the back or south wall had been a wide fireplace, but this was entirely ruined. In order to save what was left of vault and ashlar facing we have had the wall faces carried up in rough rubble masonry, and the opening of the fireplace, which was all that could be shown, spanned by a steel girder by way of lintel. On the new masonry has been carved the date 1909. The northern guard-chamber has not yet been fully cleared out, but seems to have resembled the other in every way; we do not, however, yet know for certain whether it contained a fireplace. To the west of it there has been hollowed out of the side of the gate-hall a rough recess 6½ feet wide, 8 feet high, and about 5 feet deep, with rounded head and plastered back. It probably contained a wooden bench for the porter or guard. From the gate-hall there extended westwards an archway 11½ feet broad and 10 feet 2 inches deep, leading into the castle bailey. This fortunately retains, for some little height up, like the south side of the gate-hall, its ashlar facing, which is also returned along the western or inner front of the gate-house on both sides, but more on the north than the south. On the latter it shows a flat face, which was about 12½ feet across, but on the north the wall ends with the base of a pilaster buttress 5 feet broad. The total width of the gate-house externally was therefore 37 feet, and its depth from east to west nearly 55 feet. How its upper story was reached and in what way it was connected with the general line of defence have yet to be ascertained. Before leaving the gate-house it may be mentioned that its western side is continued downwards, with a facing of ashlar, for 7 feet below its plinth, which is continuous across the front. Behind this plinth there is under the level of

the passage a solid mass of poor rubble which extended right through the gate-house, but owing to the destruction of the eastern end of the passage it is impossible now to say how far it extended in that direction. Upon the top of this rubble mass a covered drain is laid alongside the northern wall of the passage. The gate-house was therefore one of great strength, and it is not easy to name a parallel example of such extraordinary solidity. In date it appears to belong to the latter half of the twelfth century.

Within the gate-house a wide excavation was made on each side to open it out as much as possible, but the work was only carried far enough to expose the sections of the chalk bank forming the inner defence. In this bank are the foundations of what are perhaps only retaining walls, but these have yet to be investigated.

After the clearance of the gate and the consequent opening up of the original entry into the castle area, operations were begun upon the high bank forming the western side of the inner bailey. The broad top of this was suggestive of a group of chambers beneath, and a very small removal of turf and soil soon disclosed the rubble core of a considerable length of wall. This was gradually followed downwards, and proved to have, towards the bailey, a battering front, which along the base fortunately retained its ashlar facing. Only a part of this could be dealt with at first owing to the difficulty of the disposal of the rubbish, but this was subsequently overcome by laying down a tramway as far as the gate-house, and after raising the causeway sufficiently, continuing the line into the outer bailey, where the spoil has been made into a temporary embankment. The battering wall has now been exposed to its full extent. It stands nearly north and south, and shows a frontage of 85 feet, rising to a height of about 20 feet. When it is borne in mind that the whole of this was completely hidden from view by fallen rubbish, it may be possible to realize what a considerable amount of spoil has had to be removed.

The wall was originally faced throughout with ashlar, but this has only been spared for about 56 feet from the south end. The facing consists of a vertical plinth four courses high, above which the masonry batters. The battering remains to a maximum height of ten courses, and probably extended as high again before the facing again became vertical.

At its northern end the wall was originally interrupted by a covered passage or postern through the defences. Towards the bailey the archway of this has been utterly destroyed, and but for the drawbar on the south side no traces of it remain. Just within the archway there opened out of the passage on the right

a broad flight of steps ascending northwards, and a shorter flight on the left ascending southwards. The latter opened into a room, which was gradually cleared of the rubbish that filled it to the depth of nearly 10 feet. It was 22 feet wide and nearly 40 feet long, but its west end had been destroyed above the footings. In the south side was an archway through a wall 6 feet thick into a second chamber of the same length as the first, but only 12 feet wide. In the eastern half of both rooms the rubble core of the walls is standing to a height of about 8 feet, but almost all the ashlar facing has been removed. The footings are not parallel with the side walls, and are carried down for a considerable depth, and the space between them filled up with chalk rubble. Out of this rubble in the large chamber came the upper half of a Roman quern.

Beyond the narrower chamber is another which has not yet been cleared, but it has not any connexion with it, and its outer wall does not extend as far west as that of the two long chambers.

It will be seen from the plan that the two chambers in question, with the dividing wall, cover an area nearly 40 feet square, and there can be no doubt that they form the basement story of a large tower. This tower is probably identical with that called *turrim ultra posternam* on the Liberate Roll of 30 Henry III. [1246].

The stair ascending northwards from the postern passage had been despoiled of the whole of its steps and ashlar wall facing, apparently at the same time—at any rate as regards the steps—as a curious alteration in the passage itself. This consisted in walling it up at both ends, and filling up the whole of the intervening space, a length of about 34 feet, with loosely laid rubble. The inner blocking wall has gone, but the outer one remains to a height of six or seven courses.

This blocking of the passage by no means did away with the postern, but a new entrance from it was made which enabled it to more easily be defended.

The passage originally led directly into the bailey, with slightly converging walls, and was closed at each end by a door, the places of which are still marked by the drawbar holes. When the passage was blocked, an entry about 10 feet deep was left behind the outer door, and from this a new passage, 5 feet wide, was made through the wall forming its north side. This passage opened into a space in rear of the curtain wall of the bailey, between it and a staircase block which led to the upper chambers of the postern tower, and in the side of this block a recess was formed apparently to hold a seat for him who kept the postern door. The new passage was 31 feet long, and ascended north-

wards as far as a poorly built cross-wall 3 feet thick which there abuts on the curtain wall. Between this cross-wall and the foot of the stair is a gangway 6 feet wide. This continues eastward across the head of the old stair up from the postern passage. Here two doorways opened out of it: one going east into a narrow room 24 feet long, but of uncertain width, owing to the destruction of its outer wall; the other going north into an area which has as yet only partly been excavated. The lower part of the staircase referred to is still fairly perfect: the four lowest steps being intact and parts of four others.

A curious feature of the block north of the postern tower, which contains the arrangements just described, is the diminishing or increasing thickness of some of the walls. This is plainly seen on the plan, but the reason for it is not quite clear.

So far as the curtain wall has been followed northwards from the postern it is in excellent condition internally, but its outer face has been stripped of all its ashlar and shows only the flint-rubble core. It was 6 feet in thickness, and is built in straight lengths, that change their direction in accordance with the line of the bank in front of which the wall stands.

The western face of the postern tower, and the abutment of the wooden bridge across the ditch by which the postern was reached, have not yet been completely cleared. The foundation in the counterscarp of the ditch that carried the wooden piers of the bridge is plainly seen on Mr. Montgomerie's plan.

One other feature must be mentioned, the remains of a poorly built wall which stands parallel with the postern tower on the bailey side at a distance of $6\frac{1}{2}$ feet from it. The object of it and of other adjuncts in front of it is at present not clear, but it may have formed the side of a pentise.

With this account of the postern tower and its immediate surroundings concludes the tale of our first season's work. The great clearance that has been made in the castle area has just reached what is apparently the rubble core of some adjunct to the south wall of the great tower, and it will not be long after work is resumed before the plan and extent of this ought to become visible. A considerable number of carved and moulded architectural fragments that belonged to it have already come to light, and will probably enable a fair estimate to be made of the appearance of the tower itself. There are evidently some other buildings of interest abutting on the wall behind the great tower, and we have yet to discover the sites of the chapel or chapels, the hall and kitchens, and the well, which must have been a large and very deep one.

Trial holes have also shown that the whole of the area of the inner bailey is covered by an artificial deposit of chalk of consider-

able thickness, which, after the castle buildings have been elucidated, must be trenched or tunnelled in search of traces of earlier occupation. With what result it is impossible to foresee, but if the original area of Old Sarum contained any Roman remains, the principal buildings ought to be looked for under the later castle works.

So far the excavations, through being confined to superficial deposits, have yielded but few objects of interest beside architectural fragments. Quantities of broken pottery, almost all of mediaeval date, occur, together with various iron objects, such as keys, spurs, etc. and a few of bronze or latten. The last include a charming little pendant of early thirteenth-century work, pounced with a fleur-de-lis.

One object found in the postern passage, a thirteenth-century mullion with moulded capital and base, and rebated at the back, formed part of a two-light opening with wooden shutters, evidently part of the repairs to the postern tower ordered in the Liberate Roll of 30 Henry III. [1246].

In conclusion we have to thank Mr. D. H. Montgomerie for his excellent plans and sections. The lantern-slides are from photographs by Lt.-Col. Hawley, taken from time to time during the progress of the work. We ought also to say that we have met with nothing but the utmost courtesy and kind help from Mr. Carey, the tenant, while the Bishop, the Dean, and other members of the Chapter have constantly encouraged us by their presence."

Mr. CARLYON-BRITTON referred to an incidental remark in the paper that the Salisbury mint struck coins of Cnut and Edward the Confessor. He could carry the mint back further, at least to Ethelred II., the predecessor of Cnut, and possibly to the reign of Athelstan, while it continued working down to the time of Henry II. It was under Athelstan that the recording of mints became general, and Henry II. more than any other king reduced the number of such establishments.

The PRESIDENT was inclined to agree with the chronicler of the sixteenth century that the neighbourhood of the military had more to do with the migration to Salisbury than want of water or the prevalence of rheumatism. The excavations described by Mr. Hope had an interest of their own, but most impressive of all were the stupendous earthworks that might date from the Bronze Age. The Research Committee selected the castle as being a simpler and more definite piece of work with which to open the campaign, but further exploration would no doubt bring to light Roman and pre-Roman relics as well as mediaeval remains of domestic and religious character. The whole site was

under the control of the Society, and such an important opportunity must not be neglected. Col. Hawley had been of the utmost assistance, and had taken some most successful photographs of the work which all Fellows of the Society should make a point of seeing in progress. The management of the excavations reflected credit on all concerned.

WILLIAM DALE, Esq., F.S.A., read the following paper on Burkat Shudi and his Harpsichords :

"Among the London craftsmen of the eighteenth century, Burkat Shudi, the harpsichord maker, occupies an honourable position. I have been moved to give some account of his life and work, because it was in my power many years ago to examine, in the house in which he lived, the books which he kept, and to make researches concerning the interesting musical instruments by which he acquired his fame. It is also interesting to realize and understand the social position and domestic life of one who, though a craftsman, nay even a mechanic, must have enjoyed the friendship and confidence of many of the famous people of the age in which he lived and mixed with them almost on equal terms. He carried on his manufacture in the house in which he lived, in the fashionable street, then only just built, named after Queen Anne's Prime Minister. The church he attended was that of St. James, in Piccadilly, and in its registers are recorded the events which happened in his family. To him, and to his son, also a Burkat, came numbers of the celebrated people of the eighteenth century, and their visiting cards were afterwards used in the regulation of his harpsichords. The picture of himself and family, to be mentioned later on, shows that his rooms were furnished with taste. Some of them were, however, workshops, and the top lofts were devoted to the storage of crow-quills and other materials.

Out of rather more than 1,150 harpsichords made by the two Shudis in 60 years I have been able to find 23, and own two of them myself. The smaller one of 1761 represents the cheapest and simplest form of the instrument. The other of 1770 has every improvement of which the harpsichord was capable, and represents its highest development.

Previous to the eighteenth century there was but little harpsichord making in England. As early as the sixteenth century the instrument was known in this country, but was imported from Italy, the land of its birth, and more often than not was called a virginal, a name afterwards more restricted to the rectangular coffer-shaped form. From 1579, and onwards for about 100 years, there flourished at Antwerp four generations of the famous family of the Ruckers, whose harpsichords were largely

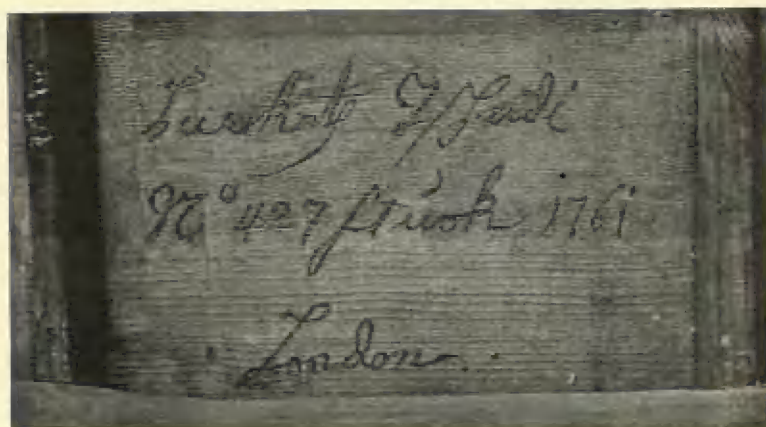
imported and used in this country. Two of them were in possession of the Shudis, and used by them constantly as hiring instruments when they must have been at least 100 years old. Samuel Pepys, it is true, when he bargained for his spinet at the shop of Haward, says he 'had a mind to a small harpsichord, but this takes up less room'. Yet I know of no English-made harpsichord of the seventeenth century, unless it be the Hitchcock at the South Kensington Museum, although it is doubtful if this was made before the days of Queen Anne. John and Thomas Hitchcock were celebrated makers of spinets, and many of their instruments exist, but unfortunately they are not dated. One or two harpsichords with unfamiliar names are known, but during the eighteenth century Shudi and Kirkman appear to have been the only makers of any repute.

Somewhere about the year 1710 a Fleming, named Tabel, was making harpsichords in London. He had learned the business in the house of the Ruckers, of Antwerp, and may have come to England when they ceased business. The younger Shudi mentions in his books in 1777 a harpsichord by 'Table' being bought by Lady Howe; and I have seen one instrument made by him. According to Burney, both Burkat Shudi and Jacob Kirkman, when they came to England, were employed by Tabel. Kirkman, according to the same authority, married Tabel's widow a month after her husband's death. He proposed at breakfast-time and was married before 12 the same day, succeeding to the stock and taking over the business. Kirkman carried on the traditions of the Ruckers's family by retaining the ornamental rose hole in the sound-board which Shudi, who must have separated from Tabel about the same time, did not. We need not follow Kirkman's fortunes further than to say that when he left Tabel's workshops he established himself in Broad Street, Soho, choosing for his sign the King's Arms; while Shudi, beginning in Pulteney Street, had the sign of the Plume of Feathers; the King and the Prince of Wales were notoriously unfriendly, and the two signs show a difference of patronage, due to this chronic disagreement. As Kirkman did not number his harpsichords it is difficult to say which maker had the pre-eminence, but there are more Kirkman than Shudi harpsichords in existence. To Kirkman is also attributed the story that when there seemed to be a likelihood of ladies forsaking the harpsichord for the guitar, he dressed up women of the town and sent them round the fashionable streets and squares, strumming on guitars to depopularize the instrument. We must not suppose that the harpsichord was a widely-diffused instrument. Its price and the expense of keeping it in order limited its use. When it reached its most improved construction it cost 85 guineas in an ordinary case, at the time when the rent of the mansion at Hyde Park

Corner, within a mile of the Court of St. James, where St. George's Hospital now stands, was £60 a year.

Burkhardt Tschudi (anglicized Burkat Shudi) was born at Schwanden, Glarus, 13th March, 1702. He was a cadet of a noble Swiss family, which had been located in that canton for centuries. The Swiss lexicon, published at Zürich in 1795, says: 'From the Schwanden branch also descended Burkhardt, a poor journeyman cabinet maker, who came to England, and became famous at the Court in London as a harpsichord maker. Among other beautiful things, he made for the King of Prussia in 1765 an elegant harpsichord, with two manuals. Burkhardt Tschudi married in London, where he died in 1773.'

The traditional date of Shudi commencing business on his own account is 1732. The earliest harpsichord of his that is known is dated 1740, and is numbered 94. As he never, in the height



SIGNATURE OF BURKAT SHUDI.

of his career, made more than 15 to 18 a year, the tradition cannot be far wrong. This instrument is at Windsor Castle, and was made originally for Frederick Prince of Wales, son of George II., and father of George III., and sent to Kew Palace. The patronage of the Prince was brought about no doubt through the influence of Handel, who came to England for the second time in 1718, the year Shudi is also said to have arrived. The two were life-long friends. Handel was a constant guest at Shudi's table, which, according to his grandson, was always well covered with German dishes and German wines. For Shudi remained distinctly foreign all his days; and though he anglicized his name, yet the calligraphy of his autograph inside the 1761 harpsichord of mine is German. Handel's recommendation

must have done much for Shudi. There is no Shudi harpsichord extant called Handel's, but at the South Kensington Museum is one by Räckers, dated 1651, concerning which the evidence is fairly strong that it once belonged to the great musician. Probably it was part of Shudi's stock, for instruments by that maker were in his house all through the eighteenth century. But we must not put too much reliance upon this. The great musical authority, Carl Engel, writing in 1879, says: 'If I were to give a list of all the musical instruments, said to have belonged to Handel, which have been brought under my notice, I should probably surprise the reader. Not only would it include organs, fiddles, and harpsichords, but even various tuning-forks, and the very anvil of the famous Harmonious Blacksmith. Indeed, no other list of this kind which I might compile would surpass it in comprehensiveness, unless it be a list of the harps and guitars said to have belonged to Queen Marie Antoinette.' Another life-long friend of Shudi was his compatriot, Snetzler the organ builder, to whom he left by will his much-prized ring, given to him by Frederick the Great, containing the portrait of that monarch. The most valuable memento of Shudi is a finely-painted picture of him engaged in tuning a harpsichord. (See plate.) The instrument is placed on a richly giltstand. Shudi wears a flowing dressing-gown. His wife, Catherine Wild, takes her tea, and the two young boys stand near. The attire of all the family betokens a prosperous man. As a work of art this picture ranks high. It was attributed by Sir John Millais to Zoffany, on account of its conversational style; but it does not resemble Zoffany's work. It was exhibited in 1892 at the Winter Exhibition at Burlington House. *The Times* critic, after speaking in its praise, says: 'It is curious that the record of the painter's name should be lost. Certainly Hogarth did not paint it, and it is so much finer in execution than the conversation pieces of his English contemporaries, that we are inclined to look abroad among Shudi's foreign countrymen for the artist. The drawing and modelling are admirable, but in the colouring there is something crude and hard, which recalls the German work of the period.'

Personally, I have very little hesitation in ascribing it to Philip Mercier, a German painter of French extraction, who was the painter of the best portraits of Handel, and also of Frederick Prince of Wales, with whom he came to England. Shudi's intimate connexion with both would be the reason of Mercier being employed. It was painted so as to fill a space in the panelling over the fire-place in the little front parlour of Shudi's house, and remained there till forty years ago. The family tradition concerning this picture is that the harpsichord Shudi is tuning is one which he sent to Frederick the Great as a present, on the



PICTURE OF BIRUKAT SHU DE TUNING A HARPSTICHORD, WITH HIS WIFE AND FAMILY

occasion of his winning the battle of Prague in 1744. Shudi was a stout supporter of the Protestant cause in Germany, and the King of Prussia was then supposed to be fighting its battles. This cannot be the harpsichord which the Swiss Lexicon mentions as made for Frederick in 1765; but the age of the two boys, painted in the picture, synchronizes with the date of the battle. Joshua, the elder, was born in 1736, and died in 1754; and Burkat, the younger son, was born a year later. No harpsichord of this date has been traced, but preserved in the apartments of Frederick the Great, at the New Palace of Potsdam, and still in perfect order, are two fine Shudi harpsichords of 1766, numbered consecutively 511 and 512, which were probably made to order as the result of the previous present. Shudi's last Royal commission was executed in 1773, when a double harpsichord, no. 691, was made for the Empress Maria Theresa, and sent to Vienna the day after he died. This instrument is preserved in the Museum at Brussels. Two years later a similar instrument, no. 762, was also dispatched to Vienna for Joseph Haydn, and is still preserved in that city as a valued relic of this great musician.

As the result of his distinguished patronage Shudi would seem to have been always of a most uncompromising disposition, and under no obligation to seek for custom. On the contrary, it was a favour to obtain one of his harpsichords at all, and the tradition is that he never put one in hand so long as one remained unsold. This is confirmed by an entry in his books, dated 20th January, 1773, 'Dutches of Malbury bespoke a harpsichord'; a month later there is another entry that 'Burkat's harpsichord is sent on hire to Miss Chumley', which means that an instrument belonging to the younger Shudi was sent from one of the living rooms. In 1769 Shudi took out his patent for the 'Venetian Swell', which increased the demand for his instruments. Of those that helped him in his business there is not much recorded, except of the young Scotchman, who came to him as an apprentice in 1751, married in 1769 his only daughter Barbara, and afterwards carried on the business with young Burkat. This industrious apprentice appears to have been the cause of a rupture between Shudi and his nephew Joshua. In *The Gazetteer* for 1767 Joshua replies to an advertisement by his uncle, who disowns any connexion with Joshua, and throws a slight upon his work by calling him a 'joiner', which, considering the hole of the pit from which he was digged himself, is a little unreasonable. Joshua's advertisement is as follows:—

'Gazetteer, Jan. 12th, 1767.

Joshua Shudi, harpsichord maker, having offered his services to the nobility and gentry in a manner which he thought could

not give the least offence to his uncle, to whom he has been a faithfull servant, and in quitting his service had an undoubted right to make use of his abilities for the support of himself and his family, finds himself attacked in a most ungenerous manner, and expressions made use of which have not the least foundation in truth. He is sorry to expose any one, but is compelled to speak of facts. His uncle did put him apprentice in the manner he describes, but he forgot to mention that he himself was brought up in the same manner. Harpsichord makers must be joiners, and is the common course of our business. I wish he had joined a little more truth to his assertions, and then he would have said that after my long service, my steady application to business, and my care of his interest in every respect would have induced him to have kept his promise of taking me into partnership as a reward, which his own conscience must tell him I deserved, if he has any conscience at all. What I assert I am ready to give convincing proof of to any lady or gentleman who will do me the honour to apply to me at my apartments at the Golden Guitar, in Silver Street, Golden Square. I have now by me harpsichords of my own making, which I shall be glad the best judges will make trial of, and desire no more favour than merit deserves. Harpsichords repaired or finished, and as to tuning, even my uncle allows me capable. If he never communicated his mystery, as he calls it, to any one, what figure will his apprentices make.'

The use of the word 'mystery' by Shudi in the sense of an art or craft, communicated or taught, is a survival from an earlier period. Joshua evidently does not quite understand his uncle's use of the word.

A few years later, in *The Public Advertiser* for Jan. 16th, 1775, is another advertisement:

'HARPSICHORDS.

Mary Shudi, of Berwick Street, St. James', widow of Joshua Shudi, nephew and disciple of the late celebrated Burkat Shudi, harpsichord maker, takes the liberty to inform the nobility, gentry, etc. that she has now by her, ready to be disposed of on reasonable terms, a great variety of exceeding fine toned single and double harpsichords. To be seen and tried at her house as above. N.B.—Mary Shudi solicits the continuance of those favours the indulgent public were pleased to confer on her late husband; and begs leave to assure them that any order they may be pleased to honour her with shall be pleasingly and carefully executed. Instruments tuned in the most exact manner on the shortest notice. A genteel first floor to lett, with other conveniences.'

In giving a few entries from the old books which I examined, I will be as brief as possible. I could find no trace of any books earlier than 1769. The reason for this is supposed to be that Shudi so mixed up his business transactions with personal memoranda that his descendants took the book away, and it was either destroyed or lost. The few extracts I quote are from a journal kept probably by young Shudi from 1770, and from a private book which Barbara Shudi appears to have started when she married in 1769. The spelling is always phonetic. A large part of its business was the tuning of harpsichords. The contracts were by the quarter, and 21*s.* was paid, the visits being once a fortnight. Thus we have 'Lady Chesterfield by ye quarter,' £1 1*s.*; 'Miss Betty paid for one quarter's tuning,' £1 1*s.* On the 7th April, 1772, however, we read: 'Mr. Ward paid his bill and agreed to have his harpsichord tuned every week for 2*s.* 6*d.*, the 7th being the first time.' Mr. Ward's harpsichord cost him therefore £6 10*s.* a year to keep in tune, a sum worth much more in those days. Add to this the constant re-quilling which was necessary, and we can see the harpsichord was an expensive luxury, which only the few could afford.

The following are the names of a few of Shudi's customers; where a name only is mentioned it means for tuning:

Lord Spencer.

Miss Scoun, at Rigate, paid 10*s.* 6*d.*

Lady Ann Hambton.

Lord Sandwich sent for a double harpsichord.

Geo. Quine, Esq., bought a double-keyed harpsichord with a pattant swell.

Mr. Lee had the Ruker for one night.

Miss Fleming hired the little Ruker.

A Reharsle at The Thacht House.

Sent the Duchess of Malbury's Italian harpsichord home.

Lady Mary Douglas had her new harpsichord sent home.

Duchess of Richmond had a new double harpsichord instead of a Ruker for hire.

Lady Pembroke hired the little Ruker for Brighthampstone.

Lady Pembroke delivered the little Ruker harpsichord to Lady Plimouth.

Lady Cathren Murray hired the little Ruker harpsichord.

Lord Plimouth bought a double harpsichord, No. 676.

Lady Archer had a harpsichord for a consort.

Lady Giddion had a harpsichord for a consort.

Lady Stoverdale's harpsichord was packed and sent to Redlinch, near Bruton, No. 750.

There are many entries of tunings and hires for 'Consorts' and

'Oratorios'. The principal concerts were held at the 'Thatched House', the forerunner of the Hanover Square Rooms; and many names of distinguished musicians are mentioned.

I will give only five more entries:

March 5, 1774. Mr. Dashwood and Gardine bought a harpsichord, No. 708, for Mr. Gainsborough, Painter, in the Circle, Bath.

March 11. Mr. Gainsborough's harpsichord was packed and sent to Bath.

7 Jan., 1776. Mr. Moreland's new harpsichord was sent to Bedford Street. The number of the harpsichord 758. (The father of Geo. Morland, who was thirteen years old at this time.)

Dec. 9, 1781. Sent a harpsichord to Sir Jos. Reynolds.

1793. Taking a Harpsichord to Mr. Bartolozzi (a print shop), 207, Piccadilly.

I need hardly say I have not been able to trace these instruments. 'Mr. Gardine' is, of course, the celebrated violinist, Giardini. If ever in any broker's shop, or elsewhere, a harpsichord should turn up, bearing the inscription 'Burkat Shudi et Johannes Broadwood, Londini, fecerunt 1774, No. 708', that harpsichord was Gainsborough's.

Interspersed with such entries are a few private memoranda, but the small book which Barbara Shudi started in 1769, when she married, contains very little business. 'My father made me a present of a ten pound note. Lady Campbell, Lady Manners, Duke of Argyle' is a sample of how three tuning orders were entered. The various commodities she bought were 'ryce, suggr, oyle, sellet, grins, fishe, sellery, catshep, etc.' Pork and veal were 5*d.* a lb., and so was 'backon': tea, 10*s.* and 12*s.* a lb. There is much information about the departure of baggage wagons and boats in the Thames. A pair of shoes cost 3*s.* 8*d.*, and a silk 'petecoate' £1 3*s.* In 1773, she writes: 'Jan. 9. Mary Ann Patrix came to my service, agreed £7 wages, and to find herself tea.' Like modern servants she did not stay long. Mary Kittson came a month or two after on £8 wages, and to find her own tea. She was followed by Sarah Sturme at £7 10*s.*, and to find her own tea. The highest wages were received by Margaretta Matilda Panzetta, who gives a receipt in the book for £10 6*s.*, 'due to me for 11 month's servitude.' Ann Watson came in 1769 for £5 a year and her tea; but a little later was raised to £6 a year, with a guinea for her tea, and 2*s.* 6*d.* a quarter for her shoes.

The curious mingling of the business life and the home life is a feature which has now quite passed away. We seem to hear

the sweet tinkling of the tuning of the harpsichords in the middle of all the domestic arrangements. The front door was always shut, and only opened at the blows of the heavy Queen Anne knocker, with which it was furnished. And at any hour at which the Duchess of Malbury, Lord Chesterfield, or other distinguished people came to see Mr. Shudi, he was always on the spot. Even in the phonetic spelling of the proper names, and of such words as Reharsal and Consort, we have an echo of the voices in the house of this distinguished craftsman.

Young Burkat lived till 1803, but long before that the harpsichord passed away. The last one was made in 1793. The latest use of it in public, which I have been able to find, was at the rehearsal of the birthday ode, at St. James's Palace, on June 4th, 1794. That most conservative institution, the King's band, retained it as long as possible, but this year it had to go. A harpsichord was used for the rehearsal, but a grand piano for the performance. Nevertheless, it died hard. Its beautiful form was carried on into the early grand pianos. Some would have even a Venetian swell put to the new-fashioned instrument, and the hammers were covered with the hardest wash leather to give a harpsichord-like tone, a custom which survives in the term re-leathering.

It is somewhat strange that neither of the Shudis attempted any decoration of the cases of their instruments other than that of skilful cabinet work. The Rückers family, of Antwerp, belonged to the Guild of St. Luke, and the paintings inside the top have saved many a harpsichord from destruction; nor did the English makers follow the custom of putting mottoes inside, as in the case of the harpsichord of Handel's, which has the motto, '*Sic transit gloria mundi*,' in allusion to the analogous brevity of life and sound. As the harpsichord was passing away, Wedgwood and Tassie medallions began to be used for decoration in grand pianos. In 1796, Don Manuel de Godoy, Prince of the Peace, ordered a grand pianoforte, which was superbly ornamented in this fashion. No cost was spared in its manufacture. Sheraton designed it, and there are copies of his design still in existence. The medallions were in gilt frames, the Prince's portrait was in front and his arms on the side. The whole cost was nearly £300 in money of the time. It was shipped to Bilbao, and was presented by the Prince to the Queen of Spain. From this time, until it turned up at a dealer's shop in Paris, a year or two back, its history is not known. Probably it was looted at the time of the French wars, and remained unknown in some French chateau. It is now in the possession of Mrs. Hudson, of Park Lane, who has allowed me to photograph it. Its singular interest and its resemblance to the harpsichord in form are my

excuses for showing you lantern-slides of it. The pleasing shape of the harpsichord, and its appropriate stand, disappeared early in the following century owing to the extension of compass and the increase in weight. A moderately successful attempt to revive the form was made by Edward Burne-Jones in 1880, who ordered one piano to be made for himself, in a plain green case; and another for William Graham, which he painted within and without, the story of Orpheus round the sides, and Mother Earth, with her good and bad children, inside the lid. Before these pianos were made the artist indicated on a sheet of paper the exact proportions which he wished the curve of the bent side to have. This curve was afterwards found, on comparison, to be the same as that of the grand pianos which were made on the lines of the harpsichord. I am showing a slide of a grand piano of 1793, as well as of the piano designed by Edward Burne-Jones.

It remains only for me to give a list of the numbers and dates of the Shudi harpsichords, the whereabouts of which I know. This list I append. I have not in this paper given any technical description of the harpsichord, as this can be obtained in any book of reference; but I can in a few words explain verbally the construction of the two instruments I am showing. The smaller, of 1761, came from the kitchen of a Hampshire farm-house, and was in such a ruinous condition that but for me it would have been destroyed. The larger one, of 1770, has always been well cared for. I obtained it from the descendants of David Hartley the younger, for whom it was made. He was the son of Dr. David Hartley, after whom Hartley Coleridge was named.

NOS.	DATE.	NOS.	DATE.
94	... 1740	750	... 1775
144	... no date	762	... 1775
229	... 1749	789	... 1776
260	... 1751	862	... 1779
407	... 1760	899	... 1781
427	... 1761	902	... 1781
511	} ... 1766	919	... 1782
512		955	... 1789
625	... 1770	1137	... 1790
639	... 1771	1148	... 1791
686	... 1773	1155	... 1793."
691	... 1773		

Thanks were ordered to be returned for these communications.

THURSDAY, 26th MAY, 1910.

CHARLES H. READ, Esq., LL.D., President, in the Chair.

The PRESIDENT referred in appropriate terms to the lamentable event that had occurred since the Society last met, the death of His Gracious Majesty King Edward VII, the Patron of the Society, and stated that as a mark of respect he had ordered the Society's apartments to be closed until the funeral had taken place, in accordance with precedent. As a result of this action one ordinary meeting had been omitted, and the statutory notice of the ballot to be held on the 2nd proximo could not be given at two meetings preceding it. In order to legalize the ballot the President asked the Society to condone this unavoidable contravention of the statute, which was unanimously approved.

The President further stated that the Council had drawn up and presented for the approval of the Society two Addresses: one to His Majesty the King, the second to Her Majesty the Queen Mother, and put the question to the vote that these Addresses be duly engrossed and presented to Their Majesties by the President in person, in accordance with custom. The Fellows present signified their consent by rising in their places.

The following is the text of the Addresses:

TO THE KING'S MOST EXCELLENT MAJESTY.

MOST GRACIOUS SOVEREIGN,

We, the President, Council, and Fellows of the Society of Antiquaries of London, most humbly beg leave to express to Your Majesty our sentiments of unfeigned Condolence for the heavy Loss which Your Majesty and the Empire have sustained in the Death of our late Gracious Sovereign, Your Royal Father, whose great and eminent Virtues, during a Reign distinguished by the Cultivation of the Arts of Peace and by the Advancement of Literature and Science, have left the deepest impressions of Reverence, Gratitude, Loyalty, and Affection on the hearts of all classes of People in Your Majesty's Dominions.

While we thus presume to testify our Sorrow at the Death of our late much lamented Sovereign, we humbly beg to offer to Your Most Gracious Majesty our heartfelt Congratulations upon your happy accession to the Imperial Throne of these Realms, persuaded as we are that the Blessings enjoyed under the reign of our late Monarch will still continue under the auspices of His August Successor to be felt and acknowledged by a free, loyal, and happy People.

This Society, which was Incorporated by Your Majesty's

Ancestor, King George the Second, to promote the Study of Antiquity and the History of former Times, cannot without the highest satisfaction reflect that the Objects which it has in view, and which have been more particularly directed to the Illustration of the History and Antiquities of our own Country, have been extended under the fostering Influence of the successive Monarchs who have been the Royal Patrons of this Society: and we humbly hope that Your Majesty will graciously condescend to honour Our Society, of which you have been for the last fifteen years a Royal Fellow, with a continuation of Your Royal Favour and Patronage.

We beg leave to assure Your Majesty of our faithful and affectionate Attachment to Your Majesty's Person and Government; and we earnestly pray that it may please the Almighty to bless Your Majesty with length of days, and with a happy and prosperous Reign.

Given under our Common Seal, etc.

TO HER MOST GRACIOUS MAJESTY THE QUEEN MOTHER.

MAY IT PLEASE YOUR MAJESTY,

The President, Vice-Presidents, Council, and Fellows of the Society of Antiquaries of London, beg leave to approach Your Majesty with the expression of their sincere Condolence, on the great Loss which Your Majesty and the Empire have experienced in the death of His late Majesty, King Edward the Seventh, Your Majesty's affectionate and beloved Consort.

His Majesty became a Royal Fellow of the Society of Antiquaries in the year 1863, and the Society continued to enjoy His Gracious Countenance and Protection after His Accession to the Throne.

The Society of Antiquaries has always entertained, in common with all the subjects of His late Majesty, the deepest Admiration of Your Majesty's exalted Graces and Virtues, and earnestly implores Almighty God that He may comfort you in your Bereavement and may long continue to grant You His Grace and His Blessing.

Given under our Common Seal, etc.

The following gifts were announced, and thanks for the same ordered to be returned to the donors:

From the Author, Guy F. Laking, Esq., M.V.O., F.S.A.:

1. Sèvres porcelain of Buckingham Palace and Windsor Castle. 4to. London, 1907.
2. The furniture of Windsor Castle. 4to. London, 1905.

From T. M. Rickman, Esq., F.S.A. :—Specimens of architectural remains in various counties in England, but principally in Norfolk, etched by J. S. Cotman. 2 vols. fol. London, 1838.

From the Trustees of the British Museum :

1. The Codex Alexandrinus in reduced photographic facsimile. New Testament and Clementine Epistles. 4to. London, 1909.
2. Supplementary catalogue of Hindustani books in the British Museum. 4to. London, 1909.
3. Catalogue of the ivory carvings of the Christian era in the Department of British and Mediaeval Antiquities, British Museum. By O. M. Dalton. 4to. London, 1909.

Special votes of thanks were accorded to Mr. Guy Laking and Mr. T. M. Rickman for their gifts to the Library.

Notice was given of an Extraordinary Meeting of the Society on Friday, 27th May, at 8.30 p.m., for the reception of communications by Messrs. W. H. St. John Hope, M.A., Edward S. Prior, M.A., F.S.A., and John Bilson, F.S.A., with reference to the Exhibition of English Mediaeval Alabaster Work, which would be opened the same evening.

An announcement was made from the Chair of a gift of £50 to the Research Fund by the Worshipful Company of Clothworkers, on the proposal of Dr. Edwin Freshfield, seconded by Sir Owen Roberts, both Fellows of the Society.

FRANCIS J. HAVERFIELD, Esq., M.A., LL.D., V.P., read the following notes, with lantern illustrations, on the Corbridge Excavations of 1909 :

“The results obtained at Corstopitum in 1909 were striking and important, though they offer a curious contrast to those of 1908. In 1908 we uncovered a broad and well-made street, and by the side of it elaborate, extensive, and massive buildings, the two granaries, the fountain, and the so-called forum, in reality perhaps a storehouse,¹ which surpassed all similar discoveries of the kind in Britain, while their interest was enhanced by notable inscriptions, a sensational hoard of gold coins, and some remarkable sculptures. In 1909 we left the fertile quarter which had yielded all this and examined the area to the north of it up to the modern road which probably coincides approximately with the northern limit of the Roman occupation, although we also were able to work out some details of the granaries from which time had cut us off in the preceding year.

The buildings found in 1909 were small, poorly constructed, and (with one exception) ill preserved : some of them had plainly

¹ As a recently excavated parallel at Carnuntum seems to show.

been destroyed within the Roman period. Only two could be assigned with any approach to certainty to a definite use. One was a granary, smaller and less well built than the two previously uncovered; its erection dated perhaps from the earlier half of the second century, and it was destroyed before the fourth century. The other, which was really well preserved, was a bath-house in the latest age of Corstopitum. The rest were confused and puzzling structures, which bore many signs of alteration and rebuilding, and in their existing form were practically unintelligible. Even their positions were irregular, and few traces were detected of streets. Plainly the northern side of Corstopitum, so far as it has been explored, never contained buildings of great importance or solidity. Plainly, too, it shows just the same lack of regular castrametation which we noticed in 1908. Despite its military granaries, Corstopitum seems not to have been laid out as a fortress. It is, of course, possible that the granaries represent an intention to erect a fortress which was begun but never carried out. It is also possible and perhaps, on our existing evidence, more likely that it was a *dépôt* for stores connected with Roman invasions and conquests in Caledonia.

Despite the meagreness of these buildings, several structural or semi-structural finds claim notice. (i) Close to the bath-house just mentioned was a clay-built kiln or furnace or forge in the middle of which was found a huge 'pig' of iron, weighing upwards of $3\frac{1}{2}$ cwt., one of the largest pieces of Roman iron yet found in Britain or perhaps in any province of the Empire. Its use is open to doubt. Metallurgical opinion seems to favour the idea that it is composed of many small bits of iron welded together, and that it was intended to serve as an anvil in a smithy. In any case, it seems to have been connected with iron-making, since broken limestone, some charcoal, and a little iron ore were noted close to the kiln. We trust next year to be able to report more fully on this remarkable find.

(ii) Another interesting feature was an aqueduct formed of a stone water-channel laid on a substantial clay embankment. This supplied the water to the fountain in the latest Roman times and, though a somewhat rude work, deserves attention for its construction.

(iii) A third structural discovery was made in front of the granaries excavated in 1908. Here we traced, facing the street, two massive porticoes, one for each granary. Each had four columns which presumably supported some sort of pediment. Differences in date and traces of alteration and repair were distinctly visible, but in this brief sketch I need not go into these details.

Besides these structural finds, fresh evidence was gained as to

the history of Corstopitum. In particular, the beginnings of that history were thrown back half a century. Beneath the granaries, and also beneath site XIV, several Samian and other potsherds were dug out at a considerable depth, and these potsherds may be ascribed with reasonable certainty to the first century and to the age of Agricola. With the potsherds in front of the granaries were found a few post-holes, some with posts in them; these show that, as we might *a priori* expect, the Romans occupying Corstopitum in the first century used wood for some at least of their buildings. But they were too small and few to reveal the size or character of the structures to which they presumably belonged.

The small finds of the year also claim a word. Coins have been plentiful, if less overwhelmingly numerous than in 1908, and a larger proportion of them than hitherto dates from the first and second centuries. Samian has also abounded, and has included (as I have said) the new element of first-century wares; on the other hand, the East-Gaulish or German products which we noted in 1908 were this year almost absent. Of individual objects the most noted, if not archaeologically the most noteworthy, is a terra-cotta mould which has become popularly associated with the name and fame of Mr. Harry Lauder. It seems to have been intended for making earthenware plaques to represent some Romano-Celtic deity with the wheel which is so well known as a Celtic emblem. With it we may connect two fragments of grey ware found (but not understood) in 1908, which depict a god or warrior wielding a battle-axe, almost, as has been observed, in the manner of Dolichenus. The only parallel that I can quote for such a mould, or for plaques made in such moulds, is a mould which I detected in the Guildhall Museum, intended for plaques of Mars or an armed man.¹ It does not follow of course that, because these plaques bear figures resembling those of gods, they had any religious use or purpose; they may quite well be merely ornamental.

Notice finally is due to a small Anglo-Saxon urn and to a piece of a sword-scabbard, which has been identified by our Fellow, Mr. E. T. Leeds, and by Dr. Montelius as belonging to the other side of the German Ocean, and to the late fourth or the fifth century. These fit in with the two Anglo-Saxon brooches and string of beads found by us in 1908."

Mr. R. H. FORSTER said the boar of the 20th Legion was found when the portico of the western granary was being opened up. The foundations of that portico were higher than the other, and

¹ Illustrated in the *Victoria History of London*, i. fig. 34: it is a good deal more conventional and less rude in style than our specimens.

indicated a later date, but the foundations of the main walls of the western granary were lower than the other. Probably a general restoration took place in the time of Severus. In the road metalling here was found a silver coin of Commodus, which agreed with the impression given by the foundations, and the time of Severus would suit the facts very well. A friend had suggested that there was a spring feeder of water for the aqueduct north-of-east of the field which was the scene of operations in 1909. The line of the aqueduct abutted close to the hedge, and a line of kerbstones existed possibly representing a larger channel coming from the east, of which the aqueduct already opened was merely a branch. The main supply would on this hypothesis have passed to the west of the town, where further excavations might disclose a second fountain.

The PRESIDENT said that the paper not only gave a succinct account of the year's work at Corbridge but, in the light of similar discoveries in Britain and abroad, incorporated a good deal of its history during the Roman occupation. Excavations conducted on scientific lines could do, and had done, much in this way, and he desired to emphasize the importance of such work being entrusted only to trained and competent excavators. Nothing was more negligible than broken pottery, but sherds had now become one of the most important chronological factors in excavation.

ALFRED E. HUDD, Esq., F.S.A., Hon. Secretary of the Caerwent Exploration Fund, gave an account of the excavations made on the site of the Roman city of Isca Silurum during the year 1909.

In addition to the completion of the excavation of the Basilica and Forum, of which a description, with plans and illustrations, was printed in the last part of *Archaeologia*, remains of five Roman houses and of two streets were dug out. One of these houses was of the usual Caerwent type, with rooms on the four sides of a central courtyard, but another, no. XXIV^a, was very peculiar in plan, and was probably some kind of public building. With the exception of this last-named structure, respecting the use of which various theories have been suggested, the rest of the excavations have been filled in, after being carefully planned. Another interesting find was a recess under the late wall of one of the houses, left apparently for the remains of a victim, similar to one found in the south diggings, in which the remains of a human skeleton were found in 1892. Mr. Alfred T. Martin, F.S.A., who has been Hon. Secretary of the Fund since 1899, having left England for the Far East (Siam), has resigned his office, and has been succeeded by Mr. Alfred Hudd, of Clifton.

Lord Tredegar, the President of the Fund, has secured, at considerable cost, some acres of land near the middle of the village, which it is hoped to excavate so soon as funds allow.

The Report of the Caerwent Exploration Committee will be printed in *Archæologia*.

SOMERS CLARKE, Esq., F.S.A., communicated the following Report as Local Secretary for Egypt:

"Having but just returned from a journey in a very unfrequented part of the Egyptian Sudan in search of Christian antiquities, I send a short account of the objects I have seen, as it may be of interest to the Fellows of the Society.

Observing, as I had done, that the Christian antiquities of Egypt had been very much neglected, not only as regards the study of the buildings but as regards their preservation, I began some years back to make plans and drawings of those relics which still exist between Cairo and Aswan. I was also enabled to make similar studies of the Christian monuments in Nubia between Aswan and Halfa, and, furthermore, had the good fortune, after calling the attention of Lord Cromer to the hopeless ruin to which these interesting buildings were abandoned, to excite his sympathy in the matter. In result the Christian monuments in Egypt are now scheduled, and have become objects of solicitude under the same conditions as are the monuments of Saracenic art, as witness Lord Cromer's annual reports.

It is, of course, very well known that Christianity spread along the valley of the Nile with considerable rapidity, making its way into the Sudan and also into Abyssinia.

The second cataract, which begins just south of Halfa, forms a division, made by nature, between one part of the country and the other.

The first cataract is but a gate. The barrier to navigation was not more than ten miles long from north to south. There is now a lock at the Dam.

The second cataract consists of a series of rapids some 150 miles long.

A more stony, desolate region cannot be imagined. It is called in Arabic 'El Batn el Haggar', the womb of stones, and no name could be more appropriate.

The rocks of which it is made, although to speak technically they are not of granite, are of a material of much the same hardness. Reefs of this stubborn material encumber the river and rise on either bank, baked by the sun and weathered to an almost absolute blackness. This hard rock is intermixed with Nubian sandstone, which, under the influence of the Egyptian sun, is weathered to a dark tone, and assumes, in the early morning

or towards the evening when the shadows are long, a beautiful plum colour, like heather. There have ever been but few inhabitants in the Batn el Haggar, for the excellent reason that there is hardly anything on which to sustain life.

The Nile flows between the rocks and leaves but little alluvial soil, as there are but few places where it can lodge.

The ancient Egyptians had penetrated this region as early as the XIIth dynasty, and have here and there left their mark. When their descendants became Christian sundry churches were built, and not only here but also in the Sudan; at least as far south as what we now know as Khartum.

Learning that I had already collected information about the churches in Egypt, the Sirdar, being Governor-General of the Sudan, suggested to me to do the same in his country, and kindly offered certain facilities.

So it came to pass that I found myself starting from Wady Halfa on the 6th December, 1909, to traverse the Batn el Haggar. Professor Sayce and Mr. F. W. Green of the Fitzwilliam Museum, Cambridge, were my companions; and with thirty camels and four tents we began our pilgrimage.

In passing through the Batn el Haggar it is wise to suppose that one will not be able to buy provisions in any form. Even fuel is difficult to get, as trees do not grow well on sand and coal-black rock. It may be taken for granted that the few inhabitants of a region such as we were to traverse have always been very poor. Such Christian monuments as we might find would certainly be very small, and so it proved.

The monuments of ancient Egypt which are seen at the northern extremity of the Batn el Haggar are on a magnificent scale; but far from being the work of the scattered and poor population they are royal and military. A chain of fortresses, all of large dimensions, was established through the first fifty miles beginning from Halfa.

On the west bank of the river, opposite the modern Halfa, Dr. Randall MacIver has excavated and is still exploring a large and complicated fortress which, at any rate for the greater part, must be of the XIIth dynasty.

A temple, well known to visitors, and of the XVIIIth dynasty, stands by the river side in the north-east corner of the fortress. This building may very possibly stand on the site of one of the same age as the fortress walls. A second range of walls which, like the inner range, are of crude brick, encloses the first, and outside this wall is a deep ditch with vertical sides, cut out of the rock. This ditch is very remarkable. The excavations have not, as yet, revealed its history by any means. It encloses, as do the before-mentioned walls, three sides of a figure roughly rectangular,

the river Nile forming the fourth side; but, in plan, it is laid out with bastions and salients, so that the intermediate curtains of wall could be flanked by the bastions.

The plan shows, in fact, an advanced knowledge of fortifications, as does that of the still larger fortress of Semna, to which we shall presently come.

Dr. MacIver is finding very many places of interest grouped together on this bank of the Nile, which I must not now stop to describe.

About twelve miles south of this, and also on the west bank, is a very large fortress, also of crude brick and of the XIIth dynasty, now called Mûrgasi. This stands on a steep bank 70 or 80 feet above the river. A ditch not being practicable on the south, west, and north sides, there is a double wall, whilst here and there spur walls of brick, some 18 or 20 feet thick, stand forward so as to give flank defence to the main walls. The outer walls enclose an area of 820 feet by 465, the great spurs of wall standing forward 150 feet or more.

On an island, in the midst of the rapids and nearly opposite the last-described fortress, we find another, also built of crude brick in the same manner as that at Mûrgasi. The plan is a rectangle 736 feet in length and 195 in breadth. Spur walls some 45 feet long project, eight on the long sides and four on the short, to give flank protection.

Twenty-two miles further south, and still on the west bank, standing on a prominence and commanding an admirable view up and down the river, we find another fort, which seems to be of the same series. This is not so large as that last described, enclosing an area of about 80 feet by 200. It does not stand in need of a double wall or ditch, but the entrance is strongly defended.

Still on the west bank, and about eight miles to the south, we come to the fortress of Semna, comparatively well known, as it was visited by Lepsius, who describes it in the *Denkmäler*, and made drawings of the temple, a map of the district, and a rather fancy plan of the fortress itself, which is by no means laid out so neatly, with its corners at right angles, as he shows. The two longest walls of this fortress are not less than 520 feet in length. In fact, the ancient Egyptian of the XIIth dynasty who laid out the fortress did not bother his head about right angles, but permitted his plan, very wisely, to be controlled by the shape of the ground.

Not only is the system of flank protection here carried out in a very scientific way, but we also find that those who designed the fort understood how to protect its walls, both by a wide and deep ditch, and by a long, smooth, paved glacis leading up

to its outer lip, so that those who would approach the ditch and walls were directly under fire from projectiles thrown from the wall tops. On the east bank of the Nile, opposite the fortress of Senna, the two of them commanding the rapids at this

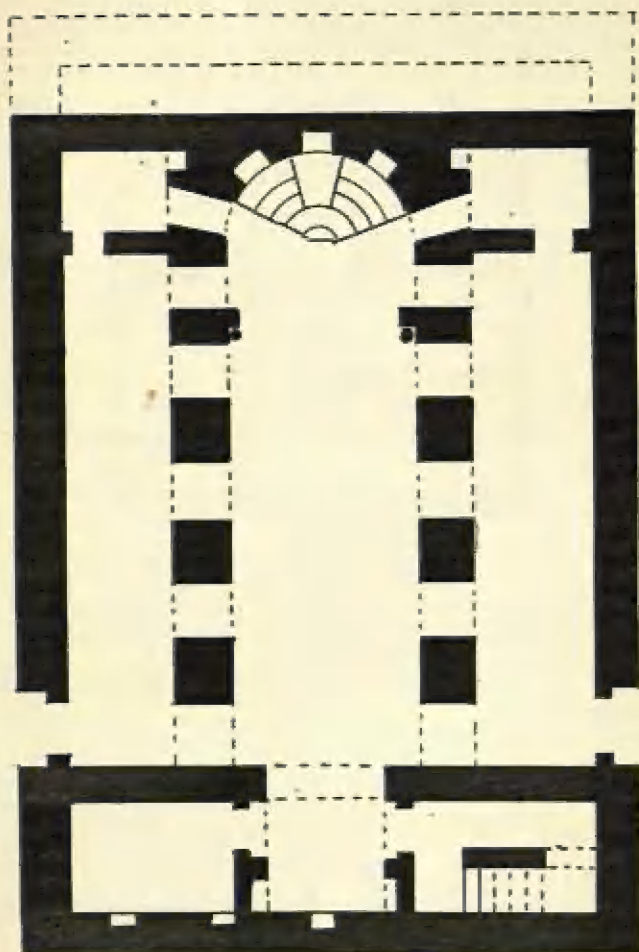


Fig. 1. PLAN OF A COPTIC CHURCH, TYPE A.

point, is a brick fortress known as Kumma, also built with the same scientific forethought. This chain of fortresses was evidently maintained from the north, as for the most part they are as ill placed for a supply of provisions as the Eddystone lighthouse.

From such a base the Sudan could be, and no doubt was, kept in subjection.

But we must turn from the more ancient ruins of military energy and consider those of the churches.

It would make such remarks as I venture to lay before the Fellows more intelligible than they otherwise would be were I to give a plan showing the two types of church commonly met with.

The one type A, fig. 1, I will call the basilican, having, as no doubt it has, a European origin.

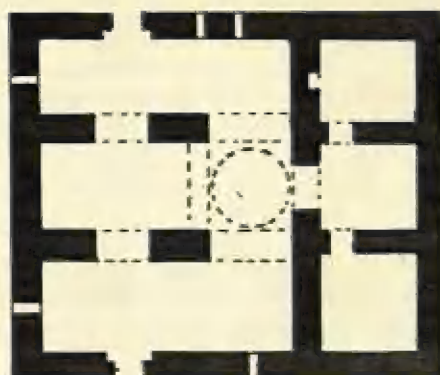


Fig. 2. PLAN OF A COPTIC CHURCH, TYPE B.

The other type B, fig. 2, it is difficult to name. In some cases it partakes of the cruciform, but its distinctive peculiarity is, that instead of its being covered with a continuous tunnel vault extending from the west end to the apse, a small dome is raised somewhere about the centre of its length, but it does not necessarily follow that the roofing is altogether of domes. I venture to believe that this type is of later date than the other, but how much later who can say?

I will venture to make a few explanatory remarks on these plans.

It should first be stated that the dimensions are always small, the poor building materials and the want of skill on the part of the builders ensured this.

The basilican plan gives us the nave running from west to east, where we find the jambs of the triumphal arch, often adorned with a pair of roughly hewn columns of granite or other hard stone. The piers between the nave and aisles are built of rough pieces of stone set in mud mortar. The arches they carry are but 3 feet 6 inches in span. The nave and aisles are covered by tunnel vaults of crude brick. The arches leading to the aisles

are but just high enough to pass through without stooping. The aisle vaults carry a flat floor, which forms an upper gallery, a species of triforium to which we arrive by the stairs, usually in the south-west corner. The triforium is carried across the west end, thus giving access to the galleries both north and south. These galleries have very little windows or openings above the arches. These openings are usually in the spring of the vault which covers the nave, the crown of which is consequently as high as the crown of the vaulted roof over the galleries. A flat terrace covers all the vaults outside. In the apse are often the remains of seats arranged in steps as here shown. On the north and south of the apse we find a small room. It will be observed that the east wall of the church is externally unbroken by the apse. This, so far as I know, is the general rule in Egypt and the Nile Valley.

The dotted lines east of the apse indicate a slight variation in plan. The rooms north and south of the apse are continued a little towards the east, and are joined by a passage behind the apse. A few examples of this variation of plan I found to exist in the Nubian Valley between Aswan and Halfa.

For a reason I cannot explain, the plans of churches which I procured in the Batn el Haggat had, in nearly all cases, this passage of communication north and south.

The small dimensions of the church will be realized when I state that the length of the example here given is, from east to west, but 52 feet.

The other type of plan is usually very small. The example here given is of average size, and is but 27 feet long from east to west. Its little nave, about 5 feet wide, is surmounted at the eastern end by a dome set above the tunnel-vaulted roofs on an octagonal drum. The arch opening eastward is barely a yard in width. The building is, in dimensions, a mere toy, but as in the case of its larger brothers, the whitewashed walls were covered with paintings of saints in grim array and very decorative in effect.

It would be to no purpose to describe at length each ruined building we came to (for they are all in ruins), and would be very uninteresting without a map of the route.

It is sufficient to say that the remains are found in those places where the rocks have retired somewhat from the river bank and have left a little piece of alluvial flat, a mile, or less, in length and perhaps a quarter of a mile wide. A thorny acacia and some palms are found on the river bank, whilst the level ground has been laid out in small square basins for artificial irrigation (for the Nile, at flood, does not rise above its banks).

The population, at all times small, is now very much reduced. The savage cruelty of the Dervishes drove away those whom it did not kill. Many have never returned.

In consequence numbers of ruined houses are seen, always built of mud, and considerable areas of ground, dry and hard as a brick from the baking sun, are waiting for the happy day when some one will return and once more begin to cultivate.

The Christian community that could have lived in these retired spots must always have been very poor as well as small in number.

From the seventh century to the fourteenth these communities were subject to severe usage at the hands of the Mohammedans. Finally, in the fourteenth century the whole of the Sudan was taken complete possession of by Islam and, as was but natural in those days, the conquering religion made short work of the crude brick churches.

For twenty-eight days with our tents and our camels we wandered on, securing plans of fourteen churches.

The amount of time consumed and money spent was so considerable, the results so small, that it was decided, upon arriving at New Dongola, to give up the camels and tents and to take to the more prosaic steamer, which from this place runs for a considerable distance southward.

Briefly to name the places we visited, the first is but a short way from Halfa, near a rock known as Abu Sir, and close by a sheikh's tomb called Abd el Kadr.

This very little building, of crude brick, retains a good deal of its vaulted roof, and consequently the paintings with which the walls have been covered are better preserved than in any other place visited. The paintings are of the usual type. Making use almost entirely of earth colours, as red and yellow ochre, with black for the outlines, the artist depicted grim figures of a Byzantine type. The building is so exposed to injury from the passer-by (and most unfortunately the tourist is not unknown just at this place), that we deemed it impolitic to uncover more of the painting than is now to be seen until we were assured that steps could be taken to protect the little building.

Ruins of a church are also to be found a little to the south.

At Geziret Thêt I found the lowest courses of the walls not only of a church but of a small monastic establishment. This one can make out by the plan.

It is very rare to find the ruins of a monastery in any part of Egypt; of the immense number there must have been but few relics are left.

At Gendal Irki were two little churches of crude brick side by side, belonging to type B.

At Gimai are the outer walls and part of the apse of a church of the basilican type A. It also had a cross-hall or narthex at its western end.

At Kulb were the remains of another little church which was very ruinous. It seemed to belong to the same family as the last.

At Kulubnarti were the ruins of a similar building only 21 feet in internal length.

Close by was a church of a plan I have never seen in any other part of Egypt; without piers or pillars, but with a dome the full width of the building (which in this case was about 21 feet) placed upon diagonal arches so as to form an octagonal resting-place for it. This building deserved further examination, but lying, as it does, quite unprotected, to uncover any of it would probably lead to further destruction.

On the Island of Sai, where we found much burnt brick, three columns of a church still stand, but all outline of the walls is completely rooted up; nothing is to be seen but fragments of broken bricks. The capitals here are well carved in a primitive way, but suited to the exceedingly hard stone of which they are made. Doubtless this church belonged to type A.

At Nulwa are the remains of a church, much of its material stolen from the temple of Sedegna, hard by. The place is an unusual version of the basilican type A.

Just south of Akkad are columns and capitals, but moved, as I think, from their original position and all prone on the ground.

At Mushu was a little ruin, of the type B.

As we leave, by its southern end, the Batn el Haggat we enter upon a country as dull and dreary as the other is impressive.

The shining rocks and crags with vast drifts of gloriously golden sand lying against and between them give place to a region of absolute flatness, dotted here and there with uncompromising thorn bushes. The ground on which we encamp, instead of being clean golden sand, consists of a nasty, gritty, grey-coloured soil, teeming with camel ticks, which bite with no little ferocity. Such rocky hills as there are being far away, we cannot expect to find that stone was often made use of, and throughout the province of Dongola, and indeed through the greater part of the Sudan, the Nubian sandstone is a miserable material. In consequence, we find that burnt brick comes into use, a use extending at least as far back as Meroitic times.

It was not worth while to plunder the materials of a church built of crude brick, but burnt brick is more valuable and is easily transported. We find therefore that the condition of the ruined churches in this part of Egypt is even more pitiable than it is in the Batn el Haggar. So thoroughly are the church sites plundered that, so far as my observations went, I can do no more than infer that the buildings were usually basilican in plan.

The sites generally present the same appearance. On a flat plain is seen an accumulation of broken red brick, rising perhaps at the utmost 3 or 4 feet. The accumulation of debris is without any indications that walls were here, or an apse there. Standing up, melancholy and forlorn, from a slight hollow in the accumulation may be seen one or more small monolithic columns, perhaps 8 feet high, surmounted, it may be, by a rudely carved capital. The columns owe their preservation to the fact that they are made of gneiss, a most stubborn material, as difficult to carve as it is to break, not therefore convenient to steal. The capitals are, as so stubborn a material demands, of great simplicity, worked only with a 'pick', and such decoration as they bear is well designed for the method imposed on the workers. The transition from the circular plan of the column to the square of the abacus is ornamented with angle leaves or volutes, whilst the intermediate surfaces are usually decorated with a cross in a circle.

Where the columns are still standing or their position can be traced they are so disposed that we may feel convinced the plan of the building was of the basilican type, the columns marking off the nave from the aisles. So completely has the brickwork of the walls been uprooted that such excavations as we made did not reveal to us the position they had occupied.

The church at Sainarti, already referred to, is an example of a series such as is above described.

After leaving New Dongola we visited the site of Old Dongola. Here has been a place at one time of importance, forming as it did the capital of the Christian Empire of Ethiopia during the Middle Ages until it was overwhelmed by the Mohammedan conquest in the fourteenth century.

The small monolithic columns of at least two churches can be seen, surrounded by shapeless mounds of brick rubbish.

At this place there is also stated by some to be a church in two stories. A vaulted structure below, square on plan and with parallel corridors, a room above with a corridor round it, the upper room approached by a rather wide stair. On the capital of a small column carrying the flat wooden ceiling of this room is cut a cross. On one of its walls has been uncovered

a piece of an early painting of a religious subject. The plan of the lower story is not like that of any church I have yet seen, the plan of the upper story is still less in accordance with type.

The archaeologist must be cautious; I therefore ask for further and more convincing proofs than have yet been offered that this building, the upper chamber of which is now used as a mosque, ever was a church.

On the Island of Ginetti we visited another ruin of, as I believe, the basilican type, with small monolithic columns and formless mounds of burnt brick round about.

From Merawi, close by the ancient Napata and under the shadow of Gebel Barkal, we made a pilgrimage up the Khor Abu Dom to the ruins of a monastery in the Wadi Ghazali.

Lepsius visited this place in 1844.¹ The place is sadly ruined since his visit, and is in a worse state of preservation than the Monastery of St. Simeon at Aswan.

The last place we examined was Soba. Soba is on the Blue Nile, a great river in itself, although but a tributary of the Nile. It drains a vast area in Abyssinia and joins the White Nile at Khartum.

Soba was the chief city of the ancient Christian kingdom of Aloa, and one of the largest and most important places in this part of Africa. There were many churches here. Now there is nothing to be seen but low mounds of broken red brick sprinkled with thorn bushes.

In 1901 Dr. Budge saw remains of a temple, afterwards used as a church.² Not a stone of this could we see. Not far off, rising from a depression in a low mound, are a few monolithic columns, the last remnants of a small church. The fallen capitals bear a cross cut on their sides. We made some excavations to find the apse or side walls of the building, and so establish its plan and dimensions, but all pieces of solid building had been utterly rooted out.

It seems to me that a careful investigation of the Christian antiquities of the Sudan would involve so much time and cost that no private individuals, nor indeed societies, unless remarkably wealthy, could undertake such a work. The results obtainable are not very promising. Soba, being close to Khartum, could be attacked, more especially if some Government assistance could be obtained in the way of excavation.

Old Dongola would be well worth examining, and with it the Wadi Letti; but there do not seem to be spare inhabitants to

¹ See *Denkmäler*, abd. i. blat. 131. He also gives a very correct plan of the church in *Egypt, Ethiopia, and Sinai* (H. G. Bohn, 1853), 219.

² *The Egyptian Sudan*, i. 324.

do the manual labour. A part, at any rate, of the Batn el Haggar could be examined, with Halfa as a base.

It is much to be wished that the University of Philadelphia, for which body Dr. Randall MacIver is now excavating at Halfa, would take this part of the Nile Valley in hand."

P. M. JOHNSTON, Esq., F.S.A., exhibited a pair of old iron hinges from one of the doors of Terwick Church, Sussex, which he considered to be of the twelfth century.

The PRESIDENT thought that the present excellent condition of the hinges was inconsistent with the view that they had been exposed to the weather on the west door of the church for eight centuries. Their style, or absence of style, also led him to doubt whether they could be of such a remote date as the twelfth century, though there was practically nothing on which to base an opinion. Mr. Johnston's prompt action in procuring them for exhibition merited the best thanks of the meeting.

Thanks were ordered to be returned for these communications and exhibitions.

EXTRAORDINARY MEETING.

FRIDAY, 27th MAY, 1910.

CHARLES H. READ, Esq., LL.D., President, in the Chair.

The PRESIDENT stated that, owing to the lapse of one of the Ordinary Meetings through the Society's apartments being closed on account of the late King's death, it had been found necessary, by reason of the pressure on the remaining meetings of the Session, to hold this Extraordinary Meeting for the purpose of formally opening the Exhibition of English Mediaeval Alabaster Work, and hearing communications thereon.

W. H. ST. JOHN HOPE, Esq., M.A., Assistant Secretary, communicated an account on the early working of alabaster in England.

EDWARD S. PRIOR, Esq., M.A., F.S.A., read some notes on the characteristics and classifications of English alabaster tables.

JOHN BILSON, Esq., F.S.A., read a communication on the examples of English alabaster tables in foreign churches and collections.

The PRESIDENT complimented the organizers of the exhibition on the success of their efforts, and trusted that the examination of such a representative series would result in some final classification of these carvings. He had always held that there was more than one school of alabaster carving in this country, and would much like to see the question settled. He thought the Society should not miss this unique opportunity of making a permanent record of the specimens collected from so many sources, and suggested that an album of plates should be prepared representing the main types and accompanied by a minimum of description. The Society was deeply indebted to all those who had sent specimens for exhibition, and could best show its appreciation by issuing a handsome volume on the subject.

The several communications will be printed in the proposed illustrated catalogue of the Alabaster Exhibition.

An adjournment was then made to the Library to view the large collection of alabaster tables and images which had been there arranged.

THURSDAY, 2nd JUNE, 1910.

CHARLES H. READ, Esq., LL.D., President, in the Chair.

The following gifts were announced, and thanks for the same ordered to be returned to the donors:

From the Author:—*Peerage and Pedigree: studies in peerage law and family history.* By J. Horace Round, M.A., LL.D. 2 vols. 8vo. London, 1910.

From the Royal Society of Antiquaries of Ireland:

Extra Publications of the Society:

1. A survey of the antiquarian remains on the Island of Inismurray. 1893.
2. Register of wills and inventories of the diocese of Dublin, 1457–1483. 1898.
3. The annals of Clonmacnoise, being annals of Ireland. 1896.
4. Index to the Journal of the Society. Vols. 1–10 (1849–1889). 1901.
5. Old Irish folk music and songs. Edited by P. W. Joyce. 1909.

From the Author:—*Le chapiteau à godrons en Angleterre.* Par John Bilson. 8vo. Caen, 1910.

This being an evening appointed for the election of Fellows no papers were read.

The Ballot opened at 8.45 p.m. and closed at 9.30 p.m., when the following were declared duly elected Fellows of the Society:

As Ordinary Fellows:

Charles Hilary Jenkinson, Esq., B.A.
Charles Eyre Bradshaw Bowles, Esq., M.A.
Horace Wilmer, Esq., M.I.C.E.
Reginald Campbell Thompson, Esq., M.A.
Edward Thurlow Leeds, Esq., B.A.
Arthur Edward Henderson, Esq.

As Honorary Fellows:

Professor Dr. Ritterling (Wiesbaden).
Professor Dr. A. von Domaszewski (Heidelberg).
M. Joseph Déchelette (Roanne).
M. Camille Enlart (Paris).
M. le Comte Robert de Lasteyrie (Paris).
M. Eugène Lefèvre-Pontalis (Paris).

THURSDAY, 9th JUNE, 1910.

CHARLES H. READ, Esq., LL.D., President, in the Chair.

The following gifts were announced, and thanks for the same ordered to be returned to the donors:

From the Author, Sir Herbert G. Fordham:

1. John Cary, engraver and map-seller (fl. 1769-1836). 8vo. Cambridge, 1910.
2. An itinerary of the sixteenth century. *La Guide des Chemins d'Angleterre*. Jean Bernard, Paris, 1579. 8vo. Cambridge, 1910.

From the Gryphon Club:—The Aragonese double crown and the Borja or Borgia device, with notes upon the bearing of such insignia in the fourteenth and fifteenth centuries. By Albert Van de Put. 4to. London, 1910.

The following were admitted Fellows:

Robert Cochrane, Esq., I.S.O., LL.D.
George Denison Lumb, Esq.
Arthur Edward Henderson, Esq.
Horace Wilmer, Esq., M.I.C.E.
Charles Hilary Jenkinson, Esq., B.A.

The PRESIDENT announced that Mr. Pierpont Morgan had been good enough to make a donation of £100 to the Old Sarum Excavation Fund.

ROBERT MUNRO, Esq., M.D., Local Secretary for Scotland, communicated a paper on a Bronze Age cemetery and other remains at Largs, Ayrshire.

MR. REGINALD SMITH drew attention to statistics of stone hammer-heads in Bronze Age burials published in 1903 by Mr. Romilly Allen,¹ who recorded one such find in Ayrshire, and a total of fifty-three in Great Britain. Of these, eighteen accompanied burials not sufficiently described to be classified as cremations or inhumations, but fifteen were known to have come from unburnt burials, and twenty accompanied burnt human remains. It was thus evident that such elaborate stone weapons were in use during a great part of our Bronze Age, and were not confined to burials of a particular kind; but similar specimens found in Scandinavia were all assigned to the Stone Age, which seemed to prove that a knowledge of bronze was acquired earlier in this country than on the other side of the North Sea. Professor Montelius² placed such British finds in his second period (the first period of Bronze, properly so called), which corresponded to about 2000-1650 B.C.

Dr. Munro's paper will be printed in *Archaeologia*.

REGINALD SMITH, Esq., B.A., F.S.A., read the following paper on a stone coffin and other Roman burials found at Old Ford, in east London.

"The recent acquisition by the British Museum of a Roman stone coffin found at Old Ford suggests an inquiry into several finds of the same character in that district, with the idea of locating the Roman main road which, according to tradition, crossed the Lea at Old Ford. I am informed by our Fellow, Dr. Laver, who has an intimate knowledge of the road between Colchester and Romford, that he has failed to obtain any clue to its course between Romford and London; and as this part of the route is rapidly being covered with houses which would hamper excavation, it is important to collect and preserve any indications of the line while yet there is a chance of testing conjecture by the spade.

It will be convenient to begin with some burials that seem to have a distinct bearing on the course of the Roman highway, though the first is some distance west of Old Ford and is an isolated find which becomes significant in the light of the facts I have now to lay before you.

A leaden coffin, found in 1862 at Bethnal Green, containing a

¹ *Archaeologia Cambrensis*, 6th ser. iii. 231.

² *Archaeologia*, lxi. 113, and figs. 56, 60, 66, 77.

the lead, as at Bethnal Green, and again at Bishopstoke, Hants.¹ Adjacent to it a large quantity of other Roman remains was discovered, but not further described; and Roach Smith added to his account² of this find the fact that, a few years before 1844, urn-burials were discovered in the centre of the present high road opposite the White Hart Inn, which occupies the eastern corner of Wick Lane. See plan, site 1.

Next must be noticed a few burials in coffins that point to the existence of a Roman cemetery near the Lea between Old Ford and Stratford. Three stone coffins, together with some sepulchral pottery, have been illustrated from Old Ford,³ and were found about 1867-8. The first was nearly rectangular and devoid of ornament, but no dimensions are given, and the associated pottery not described. Another (not illustrated) is said to have been found near Saxon Road and Coborn Road⁴ in the same locality as the first, measuring $6\frac{1}{2}$ feet in length, 2 feet 1 inch wide at the head, and 2 inches less at the foot. This coffin was provided with a slightly ridged cover, and lay upon gravel about 30 inches from the surface. It contained the bones of a full-sized man well preserved and, as usual, buried in lime. Its situation was east and west, and the arms of the skeleton were drawn down at the sides. Apparently at a distance of 2 feet from this coffin were found the pottery vessels figured on plate VII accompanying the original account, which include two cinerary urns (containing bones), two globular jugs with narrow necks, a thumb pot, a vase with hatched pattern, other vases, and a plain bowl, but above all, as an indication of date, a two-handled cup with slip decoration and a flat bowl, both belonging to types represented in the Pudding-pan Rock series,⁵ one of delicate brown ware and the other of the ordinary heavy red ware. These cremations therefore date presumably from the last quarter of the second century, and this funeral rite seems to have lasted into the middle of the next, when unburnt burials are found. The date of the stone coffins is discussed later.

The two other stone coffins found in the neighbourhood, and reported about the same time, are accurately mapped in Mr. J. E.

¹ *Journal of the British Archaeological Association*, xx. 90.

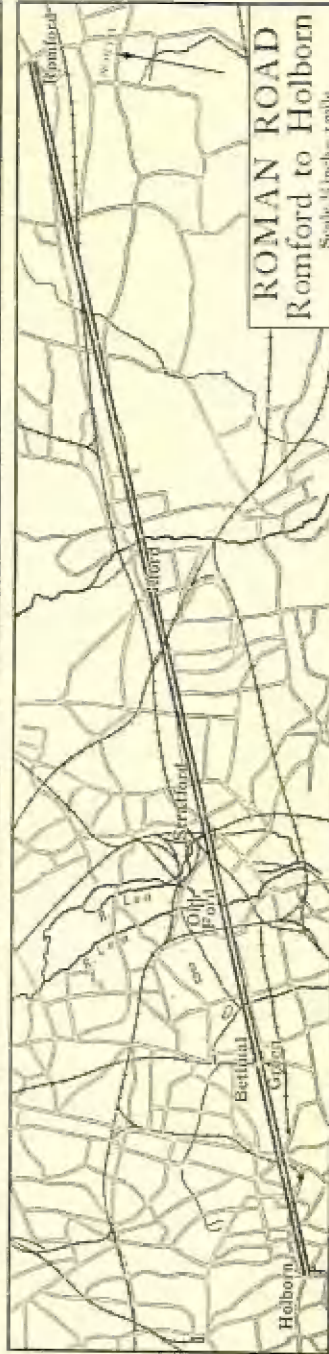
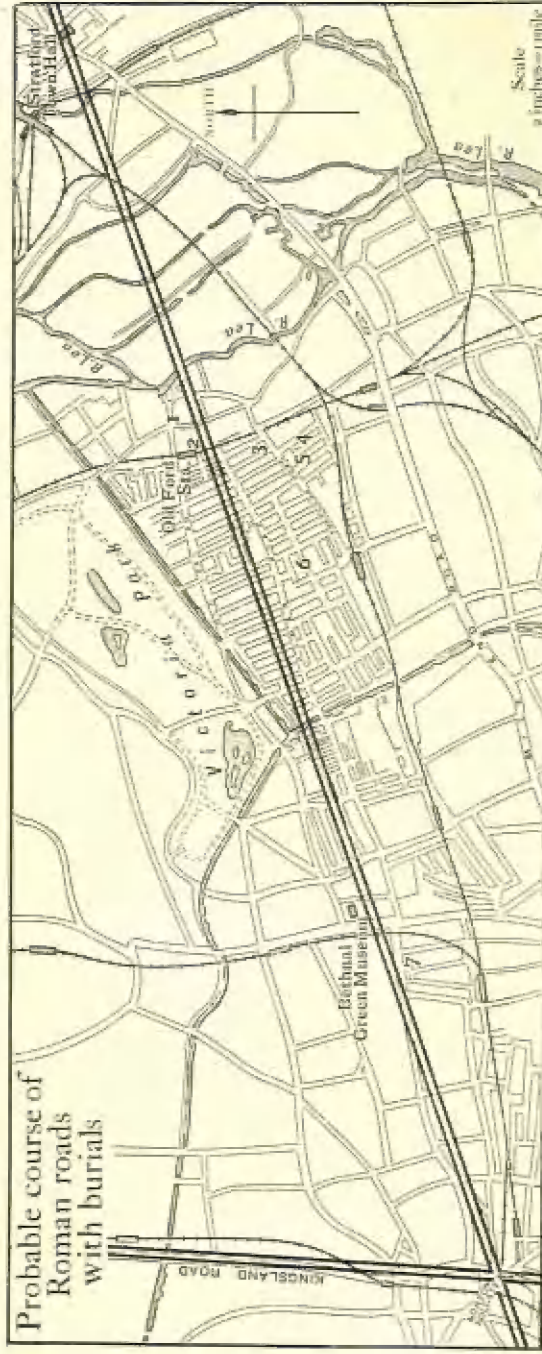
² *Archæologia*, xxxi. 310; fig. on p. 308; *Coll. Antiq.*, iii. 55.

³ *London and Middlesex Arch. Soc. Trans.*, iii. 206, plates vi, vii.

⁴ 'Some 60 yards south of the Roman highway,' presumably that distance from the modern Roman Road; but p. 203 gives this site as 200 yards north of another find accurately located in Morville Street. Hence this coffin was probably found in Parnell Road (site 3), which is more than $\frac{1}{2}$ mile from Saxon or Coborn Road. On the other hand, some of the railway employés remember a stone coffin being found in Saxon Road (site 6).

⁵ *Proceedings*, 2nd S. xxi. 273 and form 2 on plate opposite p. 279; cf. p. 274. Another brown-ware cup from York (York Museum) is imperfect, but has the surface intact.

Probable course of Roman roads with burials



Price's account.¹ The site is now at the back of two adjoining houses in Morville Street (nos. 12, 14), and the coffins lay parallel to each other 10 feet apart and approximately north-east and south-west. One is hewn from a block of highly fossiliferous stone such as occurs in the oolitic beds at Bath, Dundry, Northampton, Uppingham, and elsewhere. Its length is 6 feet 2 inches, width 2 feet, and the inside dimensions are 5 feet 6½ inches by 1½ feet. Its depth is uniform, 12 inches inside and 16 inches outside, and one end is rounded, like the coffin found at Notting Hill.² The lid, on the other hand, is rectangular, measuring 6 feet 3 inches by 2 feet; and on its under surface a space 5 feet 7 inches by 17 inches had been hollowed out to a depth of 2 inches, the material being the same as the coffin. It contained the perfect skeleton of a woman covered in with lime and lying with the feet at the rounded (or south-west) end,³ and beside the ankle was a small vase of black glazed pottery known as Castor ware. The lid overlapped the rounded end by a few inches (not being flush at the head) and partly protected a large amphora⁴ of coarse red ware and globular form with a diameter of 2 feet and a pointed base. The top was broken and the handles missing; and within were the remains of two adult skeletons, but with no indications of cremation. This and other details render it probable that the remains of two former occupants of the coffin had been transferred to the amphora to make room for another burial, a second cover being perhaps provided at the same time to replace a broken one. See plan, site 4.

The other coffin was rectangular and much larger, measuring 7 feet 2 inches by 2 feet 4 inches outside and being 20 inches deep at either end. The oolitic stone was of finer texture, and the lid extremely massive, of the same length as the coffin and 9½ inches thick. Flatter than the last, it had the same sinking on the under surface. Inside was lime as before, and the skeletons of two men and a woman in perfect order. Two lay side by side, one perhaps having been shifted to accommodate the other, and the third had been placed at the other end, partly between the others. In the vicinity, but unconnected with the interments, were found two coins of Probus (276-282) and the remains of an iron sword in a sheath of bronze.

Independent evidence of burials in Saxon Road has been obtained from employees of the North London Railway Co., who

¹ *London and Middlesex Arch. Soc. Trans.*, iii. 208, pl. vi, figs. 2, 3.

² *Ibid.* p. 209 (fig.).

³ A stone coffin found lying north and south at Valentines, east of Wanstead Park, also had the rounded end at the foot. *Archaeological Journal*, xxi. 94.

⁴ These were frequently used by the Romans as cinerary urns.

remember a stone coffin being found about the middle of that road, on the Collingwood estate (site 6). This discovery was probably made after 1868, when two, already mentioned, came to light in this neighbourhood, and though the site in the latter case seems to have been intentionally misstated, there is good reason to suppose that a cemetery once existed where Saxon Road now stands. The railway men also remember a stone coffin being found on the site of the Carlisle Tavern (site 5) at the south-west corner of Lacy Street, about 100 yards west of the finds in Morville Street.

In 1856 a report was made to the London and Middlesex Archaeological Society¹ on a discovery at Mr. Hemming's Iron Church and House Works at Bow. The site is to the north of the Bow Road, not far from the Bow Station of the North



Fig. 1. ROMAN STONE COFFIN FOUND AT OLD FORD.

London Railway, and occupies the north-west angle of the intersection of that line with the Eastern Counties (now the Great Eastern) Railway.² A rectangular coffin³ cut out of a single block of freestone was found lying east and west, and measuring 6 feet 7 inches in length, 2 feet 2 inches in breadth, and the same in depth outside. The thickness of the sides was apparently 4 inches throughout, and the bottom must have been 6 or 8 inches thick. The lid, which lay in position less than 4 feet from the surface, was 2 feet 2 inches wide and 6 feet 7 inches long, flat below and slightly convex above. There was no inscription or ornamentation of any kind, and the workmanship was some-

¹ *Transactions*, i. 102.

² Contemporary maps show these works covering a large area now bounded by Tredegar and Mostyn Roads, and the railway lines on the east and south, but the exact site of the discovery cannot be determined. The area includes the finds in Lacey and Morville Streets.

³ Said to be like fig. 1 of plate vi, *ibid.* iii. 207.

what rough. Discovered entire, it was broken to pieces by the workmen, but is known to have contained the perfect skeleton of an adult, the arms crossed on the breast; and nothing else but a deposit of lime, as is often the case in Roman burials of this kind. On the same site and in close proximity to the coffin were also found a cinerary urn of grey pottery holding the burnt bones of an infant, a jug apparently of Gaulish red ware, and a saucer of a coarser red ware. Mention was further made of a burial-ground somewhat further north in digging for the foundation of some houses.¹

The Directors of the North London Railway Co. have recently presented to the British Museum, through Sir Thomas Snagge, a Roman stone coffin found about forty years ago during the removal of topsoil and ballast from an area south-east of Old Ford Station (site 2), now used as a siding by the London and North-Western Railway Co. The exact site is near the crane, a few yards from the end of the platform; and according to employés on the line, the coffin lay north and south 4-5 feet below the surface of what was then a field, and contained a human skeleton. The workmen broke the lid with their picks, and about three-quarters of it,² in two pieces, can be seen in the photograph (fig. 1). It is slightly coped, being 6 inches thick in the centre and $4\frac{1}{2}$ at the edges, and tapers a little towards the foot, from 2 feet 4 inches to 2 feet 2 inches. When measured in 1907 it was complete, and 6 feet 9 inches long. The coffin itself is broken, and of the same length, but rectangular, about 2 feet 3 inches broad and about 15 inches in height. The sides are fairly smooth, still showing the tool-marks, and have a thickness of 4 inches, which gives an inside breadth of 19 inches. The depth inside averages 13 inches, but the bottom is not smooth, and appears to have decomposed irregularly. The material is a rather soft freestone, that used for the lid being full of small fossil shells. Across the uncovered end, at the extreme edge of the upper face, is a band of iron-rust, perhaps due to the former presence of an iron bar to secure the lid. Two iron clamps are still in position at both ends of the sarcophagus found in the Minories and now in the British Museum.

It is thus evident that there was a Roman burial-place at Old Ford extensively used in the inhumation period (which I believe was from about A.D. 250 onwards into Christian times),³ as well

¹ This part of London was built over 1862-1887: see a paper by our Fellow, Mr. Gomme, in *Geographical Journal*, xxxi (1908), 489.

² The lid was broken but complete when I examined it in April, 1907.

³ There is a temptation to regard the east-and-west burials as Christian, especially when there is no grave furniture, but the orientation of stone coffins varied considerably (e.g. *Proceedings*, 2nd S. xxi. 35).

as at an earlier date, to judge not only from the instances of cremation mentioned, but also from the datable pottery found in association. It is well known that the Romans and Romanized peoples of the Empire were in the habit of burying their dead along their main roads, and in London there are several cases in which the angle between two such roads has been utilized for a large number of burials. The Old Ford cemetery may have been enclosed by two forking roads and the Lea valley, but I am at present concerned only with one highway, of which there is a very strong tradition. The very name of this district is significant, and the direction of the road is indicated with every appearance of probability by the name of the existing road leading from the City to Old Ford Station (see map). Roman Road is the eastern extension of Green Street, and stretches from the Regent's Canal to the North London Railway, at an average distance of $\frac{1}{2}$ mile from Victoria Park. As the plan shows, there is no regular alignment of the burials at Old Ford to indicate the exact position of the Roman highway which we have every reason to suppose here crossed the Lea on its way from London to Romford and Colchester; but there are happily other indications of its ancient course. The best piece of evidence was afforded by dredging operations undertaken by the Lea Conservancy Board in the ordinary discharge of its duties. Below the Old Ford locks, at a point opposite the chemical works of Messrs. Forbes, Abbot and Lennard (Ice-land Wharf),¹ were dredged up some years ago from the bed of the river large lumps of herring-bone masonry that formed part of a causeway. Such heavy material would not be much displaced by the stream, and may be regarded as being *in situ*, but there might be some doubt as to its date. The story of Bow Bridge is well known, but may here be repeated to show that the herring-bone paving of the ford should be at any rate earlier than the twelfth century.

‘Matilda, wife of Henry I., having herself been well washed in the water, caused two bridges to be builded in a place one mile distant from the old ford, of the which one was situated over Lee at the head of the town of Stratford now called Bowe because the bridge was arched like unto a bowe, a rare piece of work, for before that time the like had never been seen in England. The other over the little brooke, commonly called Chansel Bridge. She made the King's highway of gravel between the two bridges.’² At an inquisition in 1303 the jurors declared upon oath that at the time when Matilda, the good Queen of England, lived, the

¹ This firm kindly informs me that the wharf has since been occupied by the Standard Ammonia Co.

² Lysons, *Environ of London*, iii. 489.

road from London to Essex was by a place called the Old Ford, where there was no bridge, and during great inundations was so extremely dangerous that many passengers lost their lives; which coming to the good queen's ears, she caused the road to be turned where it now is, namely, between the towns of Stratford and Westham: and of her bounty caused the bridges and road to be made, except the bridge called Chaner's bridge, which ought to be made by the Abbot of Stratford.

Numerous instances of such paving in Roman times render the date of the ford practically certain. In the British and Guildhall Museums are specimens from Budge Row, Cannon Street,¹ where I believe the Walbrook was crossed by one Roman main road, if not by two; and several instances of such paving have been recorded on Roman sites both in Britain² and on the Continent.³

Particular stress must be laid on this location of a paved ford across the Lea as the Roman road is incidentally mentioned in the *Victoria History of London* (i. 32), and is there said, through a misunderstanding which I much regret, to have crossed the Lea between the lock and the passage of the outfall sewer. The chemical works referred to are in fact south of the sewer crossing, and at the eastern end of what is now Iceland Street, a short approach to the wharf marking, in my opinion, the position and direction of the original Roman road, practically in the same line as the present so-called Roman Road. There are, however, some indications that the former ran a little north of the latter, and these I proceed to state. It may be taken for granted that Roman main roads followed a straight line in the absence of serious physical obstacles, of which a possible instance will be mentioned below. The onus of proof therefore rests with those who would have these roads diverge from the straight line; and we may proceed to imagine the Roman road from Colchester through London to Silchester and the west passing in a direct line from Old Ford to a bridge over the Fleet, now represented by Holborn Viaduct (see map). Arguments in support of this course for the road have been already published,⁴ but two points must be mentioned in connexion with the section between the Lea and the Fleet. The first is that this line would link up the

¹ *Victoria Hist. London*, i. 34, 96. Similar finds in Gresham Street (Lad Lane and Cateaton Street), in *Archaeological Review*, i. 276.

² Silchester (*Archaeologia*, lix. 344); Wroxeter (T. Wright, *Uriconium*, 207); Chester (*Journ. Archit. Archaeol. and Hist. Soc. Chester*, ii (1864), 314; iii (1885), 32; viii (1902), 87; Borough Hill, Northants (*Archaeologia*, xxxv. 384).

³ e. g. near Pola, Istria: *Jahrbuch für Altertumskunde*, ii. 132.

⁴ *Victoria History of London*, i. 31. The straight line from Romford to Holborn would coincide with Queen Street, south of Seven Kings station.

isolated coffin-burial behind the Police Station near the eastern end of Bethnal Green Road (site 7); and secondly, this Roman road seems to have been diverted in the fourth or late third century by the swamp known as Moorfields. This was drained and largely built over in modern times, but was evidently created by the damming of the Walbrook by the city wall. The curious history of this morass was given to this Society in 1906,¹ and the choked-up gratings at the base of the wall have been discovered in recent times. Only one fact need be added, and that gives a clue to the date of this event. In the National Collection are preserved bracelets and other ornaments, together with a gold coin of Salonina, the wife of Gallienus (253-268), which were found in the coffin of a girl in Moorfields. We may assume that the district was then firm and dry, and was no doubt traversed by the main road which, after the flooding of the Walbrook, had to follow the edge of higher ground to the north in order to arrive at the Fleet Bridge. This curve would coincide with Old Street where two Roman roads in the same line, one above the other, were discovered² in 1867 during deep excavations for the north mid-level sewer."

The PRESIDENT pointed out the necessity of collecting any scraps of knowledge that might enable the early history of London to be drawn up. Systematic excavation was practically impossible, but from time to time opportunities presented themselves, as for instance the erection of new Post Office buildings in Newgate Street, where a bastion of the Roman wall had been uncovered and preserved. It was important to plot the finds on a map before the neighbourhood was altered beyond recognition. Mr. Smith had given some attention to this matter, and had evolved a system for the Roman roads of London which was certainly a reasonable one, even if it could not be proved by excavation.

Mr. REGINALD SMITH exhibited a series of striated flints of neolithic appearance found by Dr. Allen Sturge and himself on the surface at Icklingham, Suffolk, and read the following paper:

"The primary object of this paper is to bring before the Society a flint flake of human workmanship which I was fortunate enough to pick up last Christmas in a ploughed field at Icklingham. The striations on it will be apparent to every one,

¹ *Archæologia*, lx. 180. Stukeley looked upon the morass as a defence for the city on the north (*Itin. Curianum*, ii. 12); and it is conceivable that the Walbrook was allowed to flood Moorfields for this purpose.

² *London and Middlesex Arch. Soc. Trans.* iii. 564 (with section).

but their explanation will be a harder task : and as I owe to my friend Dr. Allen Sturge not only the opportunity of finding this specimen but also an explanation of its condition, I take this opportunity of summarizing his views, which are illustrated by some examples from his collection as well as the few of which I am the happy possessor. He himself read a comprehensive paper to the Royal Anthropological Institute last year on this and cognate subjects ; but as it will not be printed in the Institute's *Journal* I am glad of his permission to lay the case before this Society as a possible explanation of the facts observed in his own neighbourhood.

The flint in question is a flake $2\frac{1}{4}$ inches long and $1\frac{1}{4}$ inches wide, of subtriangular form, with what is probably part of the bulb of percussion at the apex. One face is gabled, and has a patch of white patination, the depth of which can be seen on three edges, but on the fourth it merges without a break into the black surface. On the flat face, which is blue-black, are conspicuous striations, consisting of six to a dozen parallel lines interrupted only by the inequalities of the surface, and a short series in another direction as well as other longer transverse lines. It is possible that the human workmanship of this specimen may be denied, and I freely admit that there is no obvious bulb of percussion ; but many will accept it nevertheless, and for the information of the sceptical I may mention that there are hundreds of obviously worked examples with striations only less remarkable than those before you. In fact, striations on flints are the rule in that favoured area, and I proceed to enumerate the varieties of such markings recognized by Dr. Sturge, and abundantly illustrated by the vast series in his own collection.

First must be mentioned two groups which are quite distinct, and belong, in Dr. Sturge's opinion, to the earliest neolithic period, viz. :

(i) Polished celts of buff or creamy colour, much patinated and iron-stained, such as are often found, for example, on the South Downs and in Dépt. Yonne in France. This patination is easily distinguishable from that due to the impregnation of chalk.

(ii) An old white group, with white patination tending to blue, the surface often destroyed by scratching. Double and treble patinations show that this is a very old facies.

The scratched flints proper, which are generally of chalcedonic quality (the hardest kind of flint), have been separated into six classes for the sake of convenience, but these cannot be considered final or binding :

1. Fine black or bluish-grey flints with broad criss-cross scratchings in all directions.

2. Fine blue patination with much iron-moulding, generally very rough pieces with the ridges (*arêtes*) torn or battered; the scratches fairly extensive, but not so criss-crossed as no. 1, and often parallel.

3. Finer pieces of flint, black to greyish-blue, the patina less marked and the ridges less torn than no. 2; the scratching similar, but with more hair-lines, as though scratched by sand; commonly found.

4. Lustrous black surface, with parallel scratches showing white or grey; sometimes the surface is not broken, but only bruised along the lines.

5. Pale blue patination, inclining to white porcelain surface, very little iron-moulding, and hair-lines as though scratched by sand, sometimes only visible under the glass.

6. Brownish-black lustre, with slight and scanty scratches: implements and arrow-heads are found in this class.

Of these classes hundreds, perhaps thousands, of specimens have been found on the surface of a few fields in the neighbourhood of Icklingham, along with unpatinated and unscratched flints that are easily distinguished by their dull black or brown colour. The accumulation of a large number serves to emphasize the uniformity of the flints within the various classes, the same colouring being as a rule accompanied by the same kind of striations.

There may be collectors of flints in this room who would explain both iron-moulding and scratching by contact with the plough or the hobnailed boots of the farm labourer, with the shoes of horses or the teeth of the harrow. In many cases such an explanation might be admitted, and the collector often comes across a polished celt, for instance, that has rusty scratches no doubt due to exposure on the surface to accidents of this kind. But this simple solution is not of universal application. In the first place it does not account for the markings that bear no trace of contact with iron, though iron-mould may be present elsewhere on the flints in dots, lines, or splashes. In the second place, it does not explain why iron-mould is practically confined in this area to flints with particular kinds of striations; nor does it lessen our surprise that the hardest kind of flint should be constantly scratched by chance collisions with iron in farming operations on a yielding sandy soil. Moreover, the majority of these flints are from the barren heathland of the north-west angle of Suffolk, or from poor land only recently brought under cultivation.

Perhaps it is idle to insist on the inadequacy of such explanations, for many will see at once that some other agency must be invoked. Whether that agency can be traced in other



PLATE I

SCRATCHED NEOLITHIC FLINTS, ICKLINGHAM DISTRICT

- Fig. 1. Icklingham, no. 3 scratching.
Fig. 2. Mildenhall, chattering scratches, no. 4 type.
Fig. 3. Icklingham, no. 3 type, curved chattering scratch.
Fig. 4. Icklingham, no. 4 scratching.

regions has yet to be decided, but at least in the Icklingham area its results are astonishing and challenge an inquiry.

In Dr. Sturge's opinion most of the iron-stains seen on the Icklingham neoliths are due to contact with decaying iron-pyrites which was left behind through the wasting of the chalk by a heavy rainfall. Other things being equal, the oldest surface flints would more often have come in contact with pyrites and so be more iron-stained than those worked by man in subsequent ages, and the remarkable correspondence of iron-staining and striation in the Icklingham series is one of the strongest arguments against the recent origin of these characteristics.

In an article contributed to the May number of *Knowledge* last year, Mr. W. G. Clarke scouts the idea that the striations are due to contact with agricultural implements, with men's boots, or with pieces of quartz burnt into a ploughshare or harrow,¹ or finally that they are due to 'earth-creep'. He made several experiments to determine what effort is required to scratch fine chalcedonic flint, such as that on which most of the roughly parallel scratches appear. The microscope at once shows that the striations were caused by some very hard substance under enormous pressure. If one of these flints be fixed and an attempt made to scratch it with a piece of steel, under the utmost hand-pressure without a blow, it will be found that the surface is absolutely undisturbed, and microscopic examination shows that instead of the particle of flint being removed, tiny fragments of steel are ground off and left on the surface. Even with an angular piece of quartz or a glazier's diamond, some minutes' persistent work is required to make any impression that can be detected with the finger-nail.

Those who have seen Dr. Sturge's collection will remember the blue or bluish patination of the great majority of flints found in the fields in his immediate neighbourhood. Most of us have been brought up to a lively mistrust of patination, but it is fairer to regard this surface-change as an edged tool that requires a practised hand to use it. Recent investigations² in the historic pits of St. Acheul have made it clear that, at least in the palaeolithic period, patination is a useful test of relative age; and the somewhat startling disclosure has been made that while the earliest underived human flints from that site are

¹ This opinion is shared by Mr. W. A. Dutt, another local investigator (*Knowledge*, Feb. 1910).

² M. Commont's inspiring work at St. Acheul is described in *Bulletin de la Société linnéenne du Nord de France*, and his papers are well summarized in *L'Anthropologie*, 1908, 534.

unpatinated, there are upper beds characterized respectively by lustrous white, dull white, and bluish patinations occurring on distinct and datable types of implements. Indeed, M. Commont has found in the brickearth, immediately below the humus, flints of neolithic facies with white or bluish patina, which seem to agree closely with the Icklingham specimens.

Another point of importance in classifying these Icklingham flints is the frequent occurrence on the same specimen of two or even three different patinations, obviously representing repeated workings at widely different periods.¹ These doubly or trebly patinated flints give a useful clue to the chronological succession of these altered surfaces, and in many cases the different facets are seen to be striated each in accordance with its peculiar patination, though naturally later scratches are frequently seen in addition on the older surfaces.

The rate at which various atmospheric influences work on the flint to produce patination (or else lustre) depends on all manner of circumstances, and cannot be computed with any accuracy; but as the latest neolithic flints, which we may assume to have been exposed on the surface for the last four thousand years at least, are unchanged, it is clear that the process was a slow one; and yet two or three patinations exist on the same worked flint and are of a measurable thickness.

Before proceeding to expound Dr. Sturge's main theory, I must draw attention to one of the exhibits which explains a curious phenomenon. A rough block, probably quite natural, shows the genesis of the straight blue lines often seen on palaeolithic specimens as well as on neolithic flints from this area; for a sharp point has been driven by some natural force along the surface, which is broken for a certain distance, and the scratch continued by a bluish line obviously due to some molecular change occasioned by pressure, which suddenly became unequal to the task of penetrating the flint. That this particular grooving was due to ice-action (which would be granted in the case of palaeoliths) many will be prepared to admit, and the markings on many of these apparently neolithic flints differ from that specimen only in degree, an unsteady pressure sometimes producing what geologists call a 'chattering' scratch. In fact Dr. Sturge has been forced to the conclusion that the grinding pressure of ice in motion, with quartz or other hard mineral in its grip, is responsible for all the striations he has observed at Icklingham; and in spite of the neolithic character of these specimens, no one, I think, will suspect these markings

¹ Palaeolithic flakes reworked in neolithic times are figured by Mr. Worthington Smith in *Man, the Primeval Savage*, 304-5.

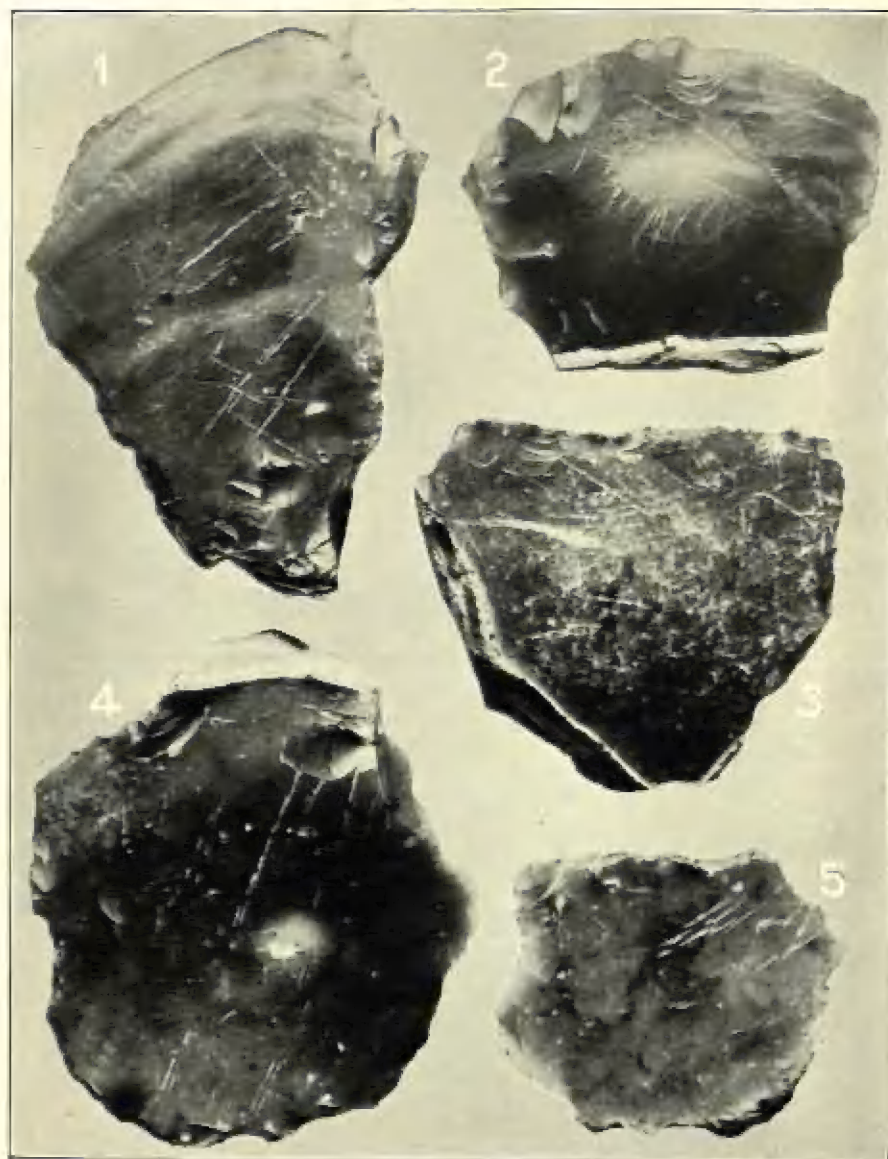


PLATE II

SCRATCHED NEOLITHIC FLINTS, ICKLINGHAM DISTRICT

- Fig. 1. Icklingham, no. 4 scratching, mainly parallel.
- Fig. 2. North Stow, no. 3 scratching, deep, large, and irregular.
- Fig. 3. Icklingham, no. 3 type, with two chattering scratches.
- Fig. 4. Icklingham, no. 4 scratching.
- Fig. 5. Culford, no. 3 scratching, also hair-lines

to be the result of polishing, as the surfaces of polished celts readily betray their origin and are quite distinct from those under discussion. As might be expected, the striations are deepest and most numerous on the projecting bulb of percussion.

It is a serious matter to postulate so late a series of glaciations to explain the phenomena of so limited an area, but there are some *a priori* arguments in favour of such an hypothesis. In the first place, there may be other districts with fresh thousands of striated flints awaiting discovery or already discovered but not appreciated; and discussion may stimulate the search for parallels in other parts. In fact Dr. Sturge has found scratched neoliths in several English counties, and noticed similar markings on certain Danish tools. The series from Northants exhibited by Mr. George affords interesting parallels to the Icklingham series. Again, the north-west corner of Suffolk is in other respects such an extraordinary district for the prehistorian, that even Dr. Sturge's discovery need not take us wholly by surprise. Within two miles of the locality of these striated flints is Warren Hill, one of the most prolific and best known pits for palaeolithic implements in the world, and one mile to the north of that is the only site in England where a series of unmistakable palaeoliths of the type named after Le Moustier has been found.¹ The district is on the edge of the boulder clay area; and at the foot of the slopes on which the striated flints are found in such profusion there can still be detected the moraines left by a series of small glaciers.

Into the romantic geological history of this corner of Suffolk I have no excuse for going this evening, and few have as good a claim to expound it as Dr. Sturge himself, who has been intimate with every detail of it for years past, and has retired of set purpose to that district as the most promising field possible for scientific exploration. Geological arguments from other areas can be adduced in support of post-palaeolithic glaciation, and it is interesting to notice how the theories of Prof. James Geikie with regard to a succession of ice ages or glaciations have been made to harmonize with the results of certain continental authorities. The following table expresses, I believe, the views of two prominent glacialists and shows that not only in Britain but also in the Alpine area there were minor ice ages long after the prodigious glaciation that gave rise to our boulder clay.

¹ Except perhaps one site in Kent which has produced hundreds of flints of peculiar type that I hope to bring before this Society next session.

PROF. J. GEIKIE.

PROF. A. PENCK.

- | | |
|---|--|
| 1. SCANIAN glacial period, not in Britain, but probably contemporary with the Chillesford clay and Weybourn crag. | Güsz glacial. |
| 2. NORFOLKIAN interglacial, represented by the Cromer forest bed, preglacial in Britain. | Güsz-MINDEL interglacial. |
| 3. SAXONIAN glacial period; severe, depositing Cromer till and contorted beds. | MINDEL glacial. |
| 4. HELVETIAN interglacial, represented in part by the middle glacial beds. | MINDEL-Riss interglacial. |
| 5. POLANDIAN glacial period, depositing the upper boulder clay. | Riss glacial. |
| 6. NEUDECKIAN interglacial, beds between chalky and purple boulder clays. | Riss-WÜRM interglacial, forest followed by steppe conditions.
WÜRM glacial, including ACHEN, BÜHL, and GSEHIRTZ.
DAUN glacial and present forest conditions. |
| 7. MECKLENBURGIAN glacial period, depositing purple boulder clay. | |
| 8. LOWER FORESTIAN interglacial, depositing Hesse gravel. | |
| 9. LOWER TURBARIAN glacial period, depositing Hesse boulder clay. | |
| 10. UPPER FORESTIAN interglacial. | |
| 11. UPPER TURBARIAN glacial period. | |

It is possible that man saw the whole of the Ice Age: he certainly saw some of it and survived. In the foregoing list it is not easy to find one's bearings, and though the palaeolithic period is not under discussion to-night, I may mention incidentally that there are at least two schools at variance on the subject abroad at the present time. That represented by Dr. Rutot of Brussels would place the earliest palaeoliths of the Drift just before the third (Riss) glaciation, and the latest palaeolithic caves (Aurignac—La Madeleine) just after the fourth (Würm) glaciation or during the minor oscillations that followed.¹ The other school, represented by Professor Boule and Dr. Obermaier, is more conservative, and assigns the Drift palaeoliths to the third (Riss-Würm) interglacial period, and considers the later caves post-glacial, that is, later than the fourth (Würm) glaciation.² Most authorities agree, however, that man inhabited Europe before at least one severe glaciation, and many recognize subsequent minor glaciations or relapses in the gradual amelioration

¹ *Glaciations et Humanité*, 64 (*Bull. de la Soc. belge de Géologie*, xxiv. 1910).

² *L'Anthropologie*, 1909.

of the European climate. The point of this digression is that an Ice Age is not necessarily fatal to human life. Certain tremendous glaciations are admitted, and there are indications, at least in the neighbourhood of the Alps, that, as the series continued, their severity diminished, and the climate of Europe has been on the whole improving since palaeolithic times, but without any abrupt cessation of glacial conditions. This view has been lately confirmed in an interesting manner by careful examination of the peat-deposits in various parts of Scotland; and a few words on Mr. Lewis's results will render the glacial action invoked by Dr. Sturge a more plausible hypothesis.

A base level for the peat-deposits of Scotland is readily afforded by the morainic deposits of the last general glaciation, and as this can be readily recognized, it is possible to correlate the different sections made and to establish a sequence which can be traced in the majority of cases.

The following table shows the general stratification of the peat-deposits in Scotland, in such distant and dissimilar situations as the South and the Shetlands, Aberdeenshire and the Outer Hebrides, except that nos. 9 and 8 (the earliest arctic and forest beds) are found only in the Outer Hebrides and the Shetlands.

1. Recent peat.
2. Forest bed.
3. Peat-bog with Arctic plants.
4. Forest bed.
5. Peat-bog plants.
6. Arctic plant bed.
7. Peat-bog plants.
8. Forest bed.
9. Arctic plant bed.

For details of this sequence and its relation to Professor Geikie's system reference must be made to Mr. Lewis's memoirs,¹ and it will suffice to note here that during the long period represented by these deposits, the limits of altitude for trees, deciduous and otherwise, and for vegetation generally, varied considerably, and can be determined by the nature of the deposits at different levels on the mountain sides. These indications of a changing climate are confirmed by the flora recovered from the arctic and forest beds respectively: a low temperature during the deposit of strata 9 and 6 is indicated by the occurrence of certain dwarf willows and the dwarf birch, the mountain avens, crowberry, black bearberry, rose-root sedum, knotted pearlwort, and the alpine campion and speedwell. The forest beds (nos. 8 and

¹ *Trans. Royal Society of Edinburgh*, xli. 699; xlv. 335; xlv. 59, summarized in *Science Progress*, Oct. 1907, 307.

2-4), on the other hand, show that the climate had so far moderated as to favour the growth of large trees, such as the birch, hazel, alder, Scots pine,¹ purple osier, and guelder rose, as well as plants like bugle, great spearwort, and six-stamened waterwort. The intercalated beds of peat (*scirpus*, *sphagnum*, and other bog plants) signify moist transition periods of uncertain duration, the average thickness of each being 5-7 feet.

Now the number of arctic horizons cannot be indefinite, and there is enough to show that these important variations of climate affected the whole of Scotland. Nor is it likely that they had no influence south of the border; in fact, there are some sections in England that point to a corresponding, if not to an identical, series of changes. A famous instance is Hoxne, where a committee of the British Association followed up the researches of Professor Prestwich on the same site, the pit which yielded the implements described to this Society by Mr. Frere in 1797. The committee's conclusions have been contested, but the boulder clay that was found on the surface² was shown to be not *in situ*, but previously thrown out of the pit, and overgrown before the section was examined. It was subsequently found to be resting on a recent land surface.

Hoxne is about thirty-six miles east of Icklingham, the difference in latitude being less than three miles, and it may be assumed that the two places had practically the same climate. The borings made for the British Association threw a good deal of light on the pre-history of the district, and the results were summarized by Mr. Clement Reid, F.R.S., who was the secretary of the committee. After the ice that deposited the chalky boulder clay had cleared away, the land was higher than at present, and the Hoxne channel (ancient tributary of the Waveney) was eroded below the level of the modern river. A subsidence turned this channel into a freshwater lake in which 20 feet of silt was deposited (bed E in the diagram). After this silting-up, there was a dense thicket of alders, which decomposed and formed the lignite bed (D), containing a temperate flora. A fresh but slight subsidence followed and, under lacustrine conditions, another thickness of 20 feet was deposited (C), but this time in an arctic or sub-arctic climate. Subsequent floods deposited beds B and A, and finally there was a bed of sand, probably blown. The palaeolithic implements (not found by the committee) are said to

¹ This does not occur in the lower forest bed (no. 8).

² The temperate bed was therefore not proved to be interglacial (between upper and lower boulder clays) as contended by Mr. Bell (*Quarterly Journal of Science*, xiii. 293) and Sir Henry Howorth (*Ice or Water*, ii. 61). See Report of British Assoc., Liverpool 1896, p. 400.

have come from the top layer of brickearth (A),¹ and Mr. Reid states that they were separated from the chalky boulder clay by two waves of climate. Such sweeping changes, he adds, cannot have been local, but must have affected wide areas. I venture to suggest that Icklingham underwent the same vagaries of climate, and arctic or sub-arctic conditions may be sufficient to account for the striations of the flints exhibited. They are indeed presumably neolithic, but have marks of extreme antiquity, and if we accept such evidence as that of Mr. Lewis and Mr. Clement Reid, and recognize cold epochs long ages after the deposition of the latest boulder clay in East Anglia, we are then on the way towards a solution of the problem.

But there are traces of intense cold still further south in beds that overlie true palaeolithic gravel; and though all geologists are not agreed as to the nature of 'contorted drift', that deposit must not be omitted from the present argument. Mr. Worthington Smith's sections at Caddington (on border of Beds. and Herts.) and Stoke Newington (north-east London) showed a palaeolithic floor² at an average depth of 12 feet with unmoved flint-flakes that could be collected and replaced on the core; above this was drift, containing older patinated implements swept down from higher ground in the neighbourhood; and between this and the surface 'contorted drift', which is generally considered the result of ice action. The important point here is not the occurrence of worked flints in the upper beds, but the indications of glacial conditions after a human palaeolithic period in the same area. To estimate in years the duration of human existence and the limits of the great Ice Age is one of the most cherished ambitions of certain pre-historians, and Professor Penck has taken as a basis of calculation the period necessary for the denudation of the earth's crust to the depth of a metre in the neighbourhood of the Eastern Alps. This unit of time is computed at 3,000 years, and on that hypothesis the duration of the great Ice Age, which is now considered by many geologists³ as a series of glaciations varying in extent, is estimated at one and a half million years. Such figures may or may not have a meaning for the individual, but the tendency certainly is at the present time to extend the horizon of primitive man and, in tracing back the stages of his development, to allow more

¹ The Hoxne palaeoliths seem to be of early St. Acheul type, whereas the brickearth at St. Acheul itself produces flints of the latest cave period. The Hoxne brickearth may be a much older deposit, or the implements may really have come from a lower stratum.

² *Man, the Primeval Savage*, sections on pp. 76, 211.

³ Mr. Lamplugh does not recognize more than one Ice Age, but admits certain epochs within it and oscillations of the ice-limit (Presidential address, British Assoc. at York, 1906, p. 557).

and more time for every advance the nearer we approach his origin. We must in fact substitute a geometrical for the arithmetical progression we have been in the habit of applying to human evolution.

The few flints exhibited this evening have led me far afield, and leave me on very dangerous ground, but in support of Dr. Sturge's views as to the duration of the palaeolithic and neolithic periods, I cannot refrain from quoting a few sentences from a recent paper¹ by Dr. Rutot, of Brussels, on the cave period. 'One now sees how futile are the efforts of certain persons who would have us believe that the late palaeolithic period (that is, the cave period) hardly lasted more than some thousand years. The more the study advances, the more do we find our chronological divisions subdividing and extending, through the introduction of long periods without geological deposits, periods during which, all the same, districts were occupied by populations with definite industrial types that can now be easily arranged chronologically. Instead of minimizing the extent of quaternary times, we should extend our limits; and pre-history alone can point out the mistakes into which we should inevitably fall, were our observations based exclusively on geological sections and on the opinions of geologists who are not at the same time pre-historians.'

Mr. THOMAS GEORGE exhibited, in illustration of the paper, a selection from a large number of striated flints found recently on the surface of fields at Duston, near Northampton. The specimens on exhibition showed a certain resemblance to those from Suffolk in form and patination, the same varieties of scratching being observed upon them. The Duston flints will be brought before the Society as a whole on a future occasion.

Mr. CLEMENT REID observed that the striations were not parallel to the longer axis as on flints in the boulder clay, which are most scratched on the projecting parts; hence he was disinclined to regard any of the striations exhibited as of glacial origin. Further, they were of neolithic date, and accumulating evidence gave no indication of arctic climate during the later Stone Age. The diagrams showed striae running parallel to the cutting edge; the flints were probably hafted loosely in deer-antler, and sand getting in between the handle and the flint might have scratched the latter in use. There were certain marine organisms that would attack soluble silica, floating bottles at sea often showing the ravages of these creatures, and patination might be due to some such action on the flint, which would not require much time.

¹ *Bulletin de la Société Belge de Géologie*, vol. xxiii (1909), p. 234 (translated).

Mr. DALE was relieved to think that neolithic man did not exist in the glacial period, even in its latest stages. In his opinion it was not proved that the flints were of human workmanship, and a large part of north-west Suffolk was covered with contorted drift and other evidences of the Ice Age. In a deposit at Runton (Norfolk) resting on boulder clay he had found flints with bulbs of percussion and arctic shells, including *Tellina baltica*, but the flints did not prove human existence at that period.

The PRESIDENT expressed his opinion that neither hafting nor organisms would explain the scratched flints from Icklingham. So far as one could judge, it was certain that something hard and heavy had passed over them either in a mass or in single pieces, and during the process the flints had been fixed in a solid bed. All this pointed to glacial conditions, but such an explanation had only been put forward tentatively, in the absence of any other that would explain all the facts. If the flints were natural, they were not hafted, and were not scratched in use; and if neolithic, they were scratched after being worked by man. He recommended any one who picked up worked flints to examine them for scratches and other peculiarities, as there was still a great deal to learn about that material. Dr. Sturge had for years paid much attention to such matters, and his enthusiasm was backed by sound judgement and a wide experience.

Thanks were ordered to be returned for these communications and exhibitions.

THURSDAY, 16th JUNE, 1910.

WILLIAM GOWLAND, Esq., F.R.S., Vice-President,
in the Chair.

The following gifts were announced, and thanks for the same ordered to be returned to the donors:

- From the Author:—Wooden monumental effigies in England and Wales. By A. C. Fryer, F.S.A. 4to. London, 1910.
- From G. D. Lamb, Esq., F.S.A.:—Wills, registers, and monumental inscriptions of the parish of Barwick-in-Elmet, co. York. *Privately printed.* 8vo. Leeds, 1908.
- From the Author:—Preliminary report on the exploration of 'Dog Holes' Cave, Warton Crag, near Carnforth. By J. Wilfred Jackson, F.G.S. 8vo. Manchester, 1910.

From the Author, David MacRitchie, Esq. :

(1) Celtic civilization. 8vo. n.p. 1907.

(2) Druids and mound-dwellers (reprinted from *The Celtic Review*, Jan. 15, 1910). 8vo. n.p. 1910.

From the Author :—Mona's records of the earth's changes. By Joseph Lewin. 8vo. Douglas, 1909.

The SECRETARY reported that a letter had been received from the President and others of the Yorkshire Philosophical Society, asking the Society to join in a protest against the proposed sale of Christ Church, York, to the Corporation on condition of its destruction and the secularization of the site.

The following resolution was accordingly proposed by PHILIP NORMAN, Esq., LL.D., Treasurer, seconded by Sir EDWARD BRADBROOK, C.B., Director, and carried unanimously :

"The Society of Antiquaries of London regrets to hear that the parish authorities of Christ Church, York, propose to hand over the building to the Corporation for the purpose of pulling it down ; and that the Corporation has agreed to undertake its destruction.

The Society has to protest strongly against the proposed course of action, and hopes that every effort will be made to avert the destruction of the church, and the more so because this is unfortunately by no means the only instance of the disregard of the ancient buildings of York which has come to the Society's notice in recent years."

C. R. PEERS, Esq., M.A., Secretary, read a paper on the Stone Bridge at Hampton Court Palace, and its proposed restoration by H. M. Office of Works. The bridge was built in 1535-6, and the accounts referring to its erection being fortunately extant, the missing parts, *i. e.* the embattled parapet and pinnacles, can be reproduced with nearly complete certainty. The bridge is of four spans, and had twelve pinnacles in all, of which, owing to the rebuilding of the gate-house, it will only be possible to replace ten. On the pinnacles were set the king's and queen's (Jane Seymour) beasts, holding shields of arms, the beasts being the lion, dragon, unicorn, bull, panther, greyhound, and yale. The last-named beast is often mentioned in the building accounts as "jall", and is a Beaufort supporter. It was used by Henry Fitzroy, Duke of Somerset, illegitimate son of Henry VIII., who died in 1536, a few months before the setting up of the beasts on the bridge, and the yale may have been used by the king in his memory. The retaining wall on the outer side of the moat crossed by the bridge remains perfect to within a foot of the present ground level, and was finished with an embattled parapet

which is to be renewed. The bridge will be complete and ready for use in the autumn, after being disused for about 220 years, it having been covered over when the moat was filled in between 1689 and 1691.

The Rt. Hon. LEWIS HARCOURT, M.P., complimented the Secretary on the able and instructive account he had given of work in which the officials of His Majesty's Office of Works heartily welcomed his collaboration. The Department deserved well of the public for the care bestowed on this and other monuments; and he hoped that the alterations would soon be satisfactorily completed. Credit was due to the Society for providing an Inspector of Ancient Monuments, whose services were much appreciated.

The Hon. Sir SCHOMBERG McDONNELL derived much pleasure from his association with Mr. Harcourt and Mr. Peers in the work at Hampton Court, and paid a tribute to the memory of Mr. Fitzgerald, formerly Inspector of Ancient Monuments, who had first suggested and planned the excavation of the moat and bridge. One of the shields of Jane Seymour had been recently found in the moat, and would serve as a model for those to be replaced on the bridge.

Mr. ERNEST LAW said that work on the foundations of the moat was still going on in 1539, and the moat referred to was along the river front, not on either side of the bridge now excavated. The moat wall was finished the year after the building of the bridge (1535, not 1536). The buttress pillars of the great gate were erected not by William III., but in 1881-2. He doubted if the gate was set to one side in the gate-house, and considered the evidence of the old views was all against that theory. The story of the bridge well illustrated the value of ancient records, without which its existence would not have been suspected, though the stonework was hit upon in 1772; and the restoration could now be carried out absolutely on the old lines.

The TREASURER expressed his appreciation of Mr. Law's enthusiasm for Hampton Court and his labours in elucidating its records; and was gratified to see the Office of Works launched on beneficent restoration of the monuments under its control.

Mr. BAINES stated that the excavations of 1539 were shown by the accounts to refer to the moat in front of the great gate, not along the river. The eleventh volume of the accounts broke off as if the series were incomplete; if the remainder was ever discovered it would probably throw light on the further

treatment of the moat and its battlements, and show that there were heraldic beasts on the battlements. Another point was how the bridge finished against the gate-house: the two sides of the bridge came exactly at the sides of the two doorways, and the last beasts came against the palace wall, being doubtless executed in high relief so as to appear as if carved in the round. There was conclusive evidence of a stone skew beneath the battlements, the length in front of the palace being 200 feet; and the 1,030 feet of stone skew mentioned would be that along the river wall of the palace as well as that in front.

Mr. HOPE pointed out the desirability of distinguishing the new work from the old by carving the date of restoration on it. The neglect of this precaution in the past had led to much confusion at Windsor and elsewhere. The missing volume or volumes of the accounts might possibly be found among those of James Nedam in the Rawlinson MSS. in the Bodleian Library, Nedam having been one of the paymasters of works under Henry VIII. He recognized the mysterious beast yale as a supporter over the gate of St. John's College, Cambridge, which was the work of the foundress, the Lady Margaret Beaufort, mother of King Henry VII.¹ This proved that it referred to the king, not to the queen, at Hampton Court.

Mr. PEERS, in replying, agreed that the yale occurred on St. John's College gateway, and referred to Pliny's *Nat. Hist.* viii. 30 for its origin. There was no doubt that the excavations of 1539 were in front of the palace, and a plan of 1731 was probably accurate with regard to the arrangements of the old gatehouse. Discrepancies might be due to the practice of making notes on the spot and finishing the drawing away.

Mr. Peers's paper will be printed in *Archaeologia*.

HENRY LAVER, Esq., F.S.A., Local Secretary, communicated the following Report on Easthorpe Church, Essex:

"About seven miles to the south-west of Colchester is the church of the parish of Easthorpe. This parish adjoins that of Copford, the church of which is so well known.

Easthorpe Church is now undergoing restoration, under the designs of Mr. Wyckham Chancellor, of Chelmsford, and it is a pleasure to be able to say that the work is being carried out with every effort to preserve every feature of interest, and adding

¹ The yale is also the device on the original seal of the *custos* or master of Christ's College, Cambridge, which was founded by the Lady Margaret Beaufort in 1505. [W. H. St. J. H.]

nothing which may have been supposed to have been there; in fact, avoiding everything approaching Grimthorpsism. As your Local Secretary I have paid many visits to the church, and now have the honour to report the observations I have made.

For some years past this church has been in a very neglected and dilapidated state, the roof being neither rain nor wind proof. This condition has been brought about by frequent changes of clergymen and the difficulty of raising sufficient funds in this small parish, which is entirely agricultural.

As usual, as soon as work began, it very shortly became apparent that much more needed renewing than had at first been considered necessary, and it was found that from the neglect of several years, as previously mentioned, the roof timbers were in such a bad condition that it would be absolutely necessary to replace them with an entirely new roof. The north wall was found to be so far out of the perpendicular that it was considered necessary to rebuild a part of it. This condition of the north wall was due to a weakening resulting from several openings having been made in it, one for a window, another for a vestry door, and thirdly the rood-loft stairs and doorways.

Fortunately, but a small portion of the upper part of this wall needed rebuilding, and this was of no antiquarian interest. But on stripping the plaster several interesting features were brought to light, and some very jerry-built repairs were discovered. These all made it desirable to remove the whole of the plaster from the walls, both inside and out.

This little church, 65 feet long by 20 feet wide, both internal measurements, and with walls 2 feet 9 inches thick, consists of a nave without either aisles or chancel arch. The chancel is simply the eastern end of the nave, without any distinguishing features, and is of the same width as the nave; and this has also a south porch and door, a priest's door, a blocked north door, and a bell turret on the west gable.

The north door, 3 feet 4 inches wide and 9 feet high, is cut straight through the wall, and is formed entirely of Roman brick. The walls are without buttresses, and are built, like those of all old buildings in this district where we have no stone, of rubble very largely intermixed with Roman tile, and stuccoed or plastered everywhere, quoins included.

Up to a few months ago this church was considered to be an Early English building, from the east window being formed by three very large lancets much splayed internally, and having an Early English pillar between them, with a row of dog-tooth ornaments on each side of the pillar, also by the two plain Early English lancets on the south side of the chancel, and one lancet of this period on the north; but neither of these lancets has any

particular feature, the stone jambs being perfectly plain. In that part of the church which we may consider the nave are two large late Decorated windows on the south, and a similar number on the north.

By the removal of the plaster from the walls, it may be seen that Easthorpe church, instead of being an Early English building, is a very early Norman or possibly even a pre-Conquest one, with the addition of an Early English chancel in place of the original, which was apsidal. It has been mentioned that Roman tile had been freely used in building this church, but the further removal of plaster made clear the fact that all the quoins of the original church were formed almost entirely of Roman tile. Also it became apparent that on the south side of the nave, which is the original part of the building, there are high up in the walls the remains of three early windows, with semicircular heads formed entirely of Roman brick. These windows are $\frac{1}{2}$ feet 2 inches high and 1 foot wide, and are splayed internally to 3 feet 10 inches wide. On the north side of the nave there is only one of these early windows remaining in a perfect condition, but it corresponds exactly to those on the south side. All have a very early feature, inasmuch as they are wider at the bottom than at the top.

These windows, when first uncovered, were filled with rubble, and when this was cleared out the remains of figures were found on the jambs of all of them; but the design of these is not readily to be made out.

An effort will be made to take good photographs of these paintings as soon as the weather is favourable, until which time care will be taken to preserve them, and it is intended to glaze the openings.

In the north wall of the church, at 25 feet 3 inches distance from the interior east wall, the late fifteenth-century door opening on to the rood-loft was found. This door is 8 feet 2 inches from the floor, and is 20 inches wide and 5 feet 7 inches high. The arch and the jambs form a simple plain lancet. On the ground level, a little to the west of the upper door, was found the entrance to the rood-loft stairs. This, like the upper one, is a simple and plain lancet 5 feet 7 inches high and 17 inches wide. Both these doorways are quite perfect, and are of the late fifteenth century, but the stairs are entirely gone. Directly above this entrance to the rood-loft stairs is a niche 18 inches wide and 2 feet 6 inches high. The arch is perfectly plain, and the jambs are formed of two stone slabs. Like the other arches it was filled up with rubble. The entrance to the rood-loft stairs being 27 feet from the east end of the church little room was left for the parishioners, the church itself being only 65 feet

long. And even this area was still further diminished by the altars which possibly existed west of the rood-loft, if this niche indicates the position of an altar.

The remains of the opening for a stoup were found inside the wall to the east of the south door, but the bason was gone and the opening was filled with rubble. It was found on removing the plaster that a window on the north side of the nave and one on the south side, both of them of the Decorated period, had been filled up with rubble; amongst this débris were found several pieces of the window tracery and of the mullions, also the stonework of the jambs.

Fortunately all these remnants of the stonework of the windows were in a fairly perfect state, and Mr. Chancellor took advantage of their condition and replaced them in the position they had previously occupied, completing the window with corresponding stonework, so that as far as possible what we see is the original stonework of the window. Generally, when the old stonework is used, it is spoiled by being scraped, dragged, and new faced. But in this instance the face of the old stones are as when disinterred from the filling of the window space; they have never been tooled or scraped in any way.

Since this report was begun the fact that this interesting little church was originally apsidal has become apparent. It was necessary to make good some of the stonework of the exterior of the nave, and in doing so a space about a yard square, commencing just over the apex of the priest's door, became dislodged. In examining into the cause of this fall, it was found that the facing stones were not tied into the wall behind, and that this wall was where the curve of the original apse commenced. This wall of the apse was in perfect condition, and in the centre of the exposed part is a putlog hole not filled in. It was formed, like some of the others found in other parts of the nave wall, by pieces of Roman tile. The curve of the apse in the part exposed was seven inches in the yard, and if this same curve continued, the apse would have been about 13 feet deep.

I am glad to say the walling around this portion of the apse wall will be finished off so as to allow the commencement of the apse to be seen."

Sir WILLIAM THROCKMORTON, Bart., exhibited a painted cloth dated 1596, with memorials of Ely and armorial lists of imprisoned recusants, which was thus described by W. H. St. John Hope, Esq., M.A., Assistant-Secretary.

"The painted cloth exhibited by Sir William Throckmorton was found some little while ago put away in a box in the roof of Coughton Court, Sir William's seat in Warwickshire.

When it first came into my hands it was in such a woful state of disintegration as regards the painting as hardly to bear handling, but has since been treated by Mr. Max Rosenheim and myself (on the suggestion of the former, and with the owner's leave) with a solution of celluloid in amyl acetate, and may now be handled with less fear of the paint falling off in crumbs. The process has had the further effect of brightening the colours somewhat.

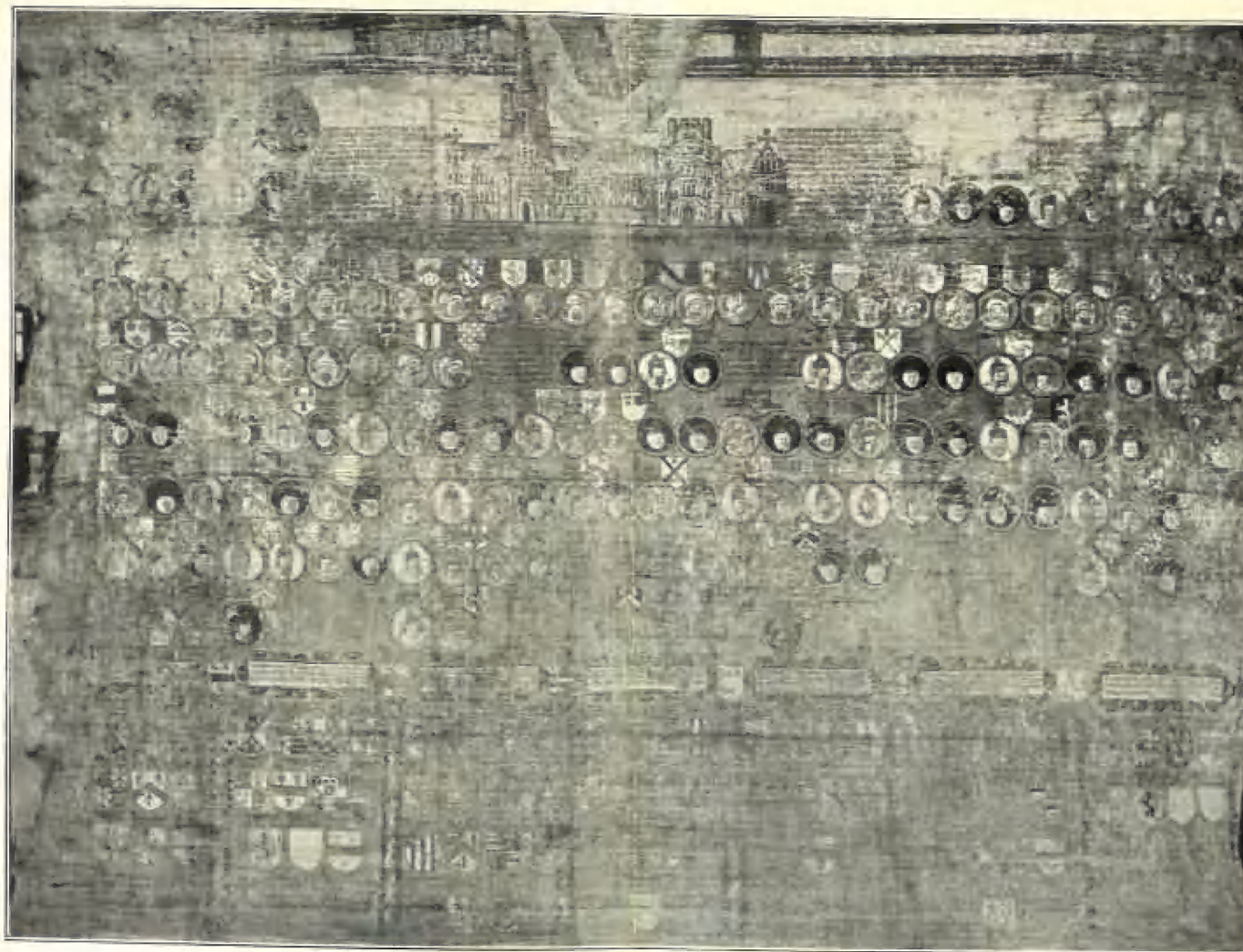
The cloth is now 9 feet $2\frac{3}{4}$ inches wide, and formed of two strips of canvas, each about 3 feet 7 inches wide, neatly joined together across the middle, so that the whole height, including the modern black rollers at top and bottom to which the cloth is nailed, is 7 feet $1\frac{1}{2}$ inch.

The whole surface of the cloth is painted in oil colour with a curious variety of subjects.

Across the top is a band of panels, $5\frac{3}{4}$ inches wide, having pale blue grounds with white scrollwork within a frame of yellow and black with a sort of egg-and-tongue beading. Just below this is a large conventional representation of the cathedral church of Ely, on a green ground with sky background. The leaded top and pinnacles of the octagon are plainly shown, and the western tower is surmounted by the lead-plated wooden spire which was removed at the end of the eighteenth century. The spire runs right through the band of panelling above it, and has to the left of it the date 'A. D. 1596' and to the right of it a picture of the Resurrection. In this Our Lord is shown nearly nude and holding a large cross, with a serpent and sleeping soldiers in armour between his feet; the whole is drawn on a cloud with rose-coloured edges.

On either side of the cathedral church is a long inscription in black letter, rather difficult to be read owing to the disintegration of the painting. That to the left is as follows:

A certaine ryche Prince asked of Chryft what he shoulde do by doynge whearof he myght possell everlastynge lyfe Christ fyrst byd hym to kepe the comaundements, Then toulde hym if thou wouldest be perfect, thou must sell all that y^e hast, & geve it to y^e poore, and y^e shalt have trefare in heaven; and come & followe me. Peter then sayed, loe we have left all thyngs & followed thee what therefore shall we have. Jefus sayed to them and I saye to you hath lefte howfe, or parents, or bretheren or landes for my name sake, then And in y^e worlde to come lyfe bountyfull rewarde, promysed to fra . . . [volu]ntarily relynquish, those worldly vanytyes preferments & pleasures, w^{ch} when death cometh y^e mult of necessitye leave, Dyd [ur]ge ther preachynge of y^e ghospell alure devoute chrystians to sell their s & to laye y^e pryce therof, w^t all other ther goodes & substance, at the [fete] of the Apostells by them to be despoysed as they thought good, and from thence it proceeded that Kyngs, whoe were to be foster fathers, and quenes who are called Prinifes of y^e church, w^t insynfte numbers of godlye chrystyns have at there greate



PAINTED CLOTH FOUND AT COUGHTON, WARWICKSHIRE, DATED 1590



char & adorned churches to y^e w^{ch} people myght reforte to be present, & partakers of y^e devyne sacryfyces, sacraments] & mysteryes & theare in one fayth & mynde, to lyft up there hartes & handes to god.

The right-hand inscription reads :

To have buylte monestarijs for such men to inhabyt in, as others | for such wemen, as dyspyfed & left all suche honors pompes plesure | & ryches what soever, w^{ch} thys worlde doeth promyff to those [who] | follow it, dedycatyng the selves wholly to y^e service of God who moved the | to buylde Colleges & free scooles for y^e instructyng & traynyng up of youth | as well in lernyng as vertues lyfe, and hospitalls for y^e mayntenaunce | of aged, fycke, la[me and] poore people, and to Indowre everye of them | w^t landes & possessions suffeyent for y^e contynuall mayntenaunce | of suche h[ouses] & famyles accordinge to the severall fondacyōs | and from hence only it is that many zelous chrystyans of all | ages callynge & sexes have not only from tyme to tyme forsake there | parents, thare wyfes, their chyldren, their landes, their goods | w^t all worldly dygnyties & preferments, but also voluntarily | yelded theire bodies to Imprisonments, to torture & to | death, whearby they myght sth y^e synglye prophet, we | have suffered hard thyngs in respect of y^e woordes w^{ch} proceeded from | thy mouth, knowing that y^e faythfull in all the pro rather then we wyl leave to followe the |

Beyond the inscriptions are a number of heads in roundels, of kings on a pale blue ground, and of black monks on a chocolate ground. On the extreme left there seem to have been three large roundels containing groups of heads of monks or nuns, alternating with smaller roundels with heads of kings. The first large and the first small roundel have been effaced, but the second large one contains a row of seven heads with an inscription, of which only the beginning 'A° 677' and the words ' & ubba' near the end can be read. It probably, therefore, represented the abbesses who ruled over the house until the destruction of the monastery by the Danes under Hingwar and Hubba in 870. The next king's head is that of Alfred, and the third large roundel contains six heads with remains of an inscription, of which '[de]stroyed [by the] danes' is all that can easily be made out. It probably referred to the refoundation by King Edgar in 970.

Below these roundels is a second row, but all of a size, with heads of [Britnoth abbot], [Kynge Edward], 'Kynge Edelrede', 'Ailsyn Abbot', [Kynge Edmu]nd, and 'Leofwin Abbot'. The roundels on the extreme right form a single row of eight heads, representing

Canut° Kyng (1016-1035)
leofryc° Abbot (1022-1029)
leoflin° Abbot (1029-1045)
Kynge Edwarde y° Saynte (1041-1066)
Wylfricus Abbot (1045-1066)
[Har]olde Kyng (1066)
Thirslan Abbot (1066-1072)
[William the Conqueror]
with a shield of his arms (1066-1087)

shields of arms. The kings' heads, as before, are on pale blue fields, the bishops' on red, and the priors' on chocolate.

The series is interrupted after the heads of Bishop Redman (1501-05) and Prior Robert Colville (c. 1500-10) by an inscription, of which little else than '... the priory of Ely...' in the first line can be read.

The heads of King Henry VIII., Bishops Stanley and West, and Priors William Whittlesey and John Cottenham are also followed by a break, apparently for another inscription, but this has not been painted in.

Next come roundels with King Edward VI., Bishop Goodrich, Robert Wells, the last prior, and a second portrait of 'Robert Welles ultim^o prior et prim^o Decanus' showing him in a flat cap and ruff instead of a monk's cowl. After another blank interval come Queen Mary, Bishop Thoresby, and Dean Andrew Perne, and again, after a break, Queen Elizabeth, and Bishop Richard Cox (mitred and bearded), both of whom were living when the cloth was painted. Beyond the bishop, with intervals between, are two roundels with portraits of Deans John Bell and Humphrey Tyndall; the last named was also living in 1596. In each case the portrait of the dean is accompanied by his arms.

Below the pictorial and armorial pedigree of the succession of the kings and queens of England, and of the abbots, bishops, priors, and deans of Ely, is a series of seven panels extending right across the lower part of the cloth, and divided the one from the other by an ornamental pillar, over which is a shield of arms. Each panel has across the top an ornamental cartouche, painted white with ornamental red border, bearing an inscription in black letter.

The first is difficult to make out, but by comparison with others seems to have read:

[The Names & armes] of y^e knyghtes & [gentelmen commytted prifoners] to y^e [Palla]ce [of Elye under y^e] custody of Ryc[harde Arken]stall Esquier [the . . . day of March 1590 & in y^e xxxij] yeare of y^e ra[yne] of [ou]r soveraigne lady [quene] Elyzabeth.

Below this were painted fifteen shields of arms in three rows of five each, with their owners' names written over.

In the first row all the shields are hopelessly effaced except the third, which bears the arms of 'S^r Thomas Tressam of Rysh-ton in y^e countie of Northäton Knite'. In the second row the first is effaced; the second bears the arms of Talbot; the third is for 'Mychnell Hare of Brusyard in y^e cōutie of Suffolk Esquire'; the fourth is for 'Edward Sulyarde of Wetherden in y^e cōūtye of Suffolk Esquire'; and the fifth, which is simply painted white, is for George Cotton of Warblington, Hants, Esq. In the third row the first and second shields are effaced; the

third is for 'Gylbert Wells of [*blank*] in y^e countye of Southā . . . Esquire'; the fourth is for 'Thomas Wylforde of Hartryge in y^e coūtye of Kente, Esquire'; and the fifth was blank, but the name over is effaced. Below the shields is written :

. Knyghtes & gentlemen above named [at] Elye [were]
 wrytē from the lordes of y^e pryvyē Counsell
 before my lorde of Canterburye and
 of MM^l a pece to kepe [good]
 to them apoynted.

The second panel (see illustration) is headed :

The Names & armes of y^e knyghtes & gentelmen commytted prysoners to y^e Pallace of Elye under y^e custodie of Rychard [Arkenstall]¹ Esquier the . . . of March 1590 & in y^e xxxij yeare of

The shields, which are arranged in three rows of 4, 4, and 3, are those of Sir Thomas Tressam of Rushton, Northants; Michael Hare of Brusyard, Suffolk; John Draycott of Paynsley, Staffs.; George Cotton of Warblington, Hants (no arms); Thomas Wilford of Hartridge, Kent; John Leedes of Wapingthorn, Sussex; Robert Aprece of Wosynge, Hunts.; Robert Greene of Stanford, Essex; Gilbert Welles of [*blank*], Hants; Richard Owen of Godstow, Oxon (no arms); and Thomas Craley of Manewden, Essex.

Below is inscribed :

They gentelmē above named were also releasyd from Elye the xix day of [October] 1590 and weare bounde in MM^l a pece to be certayn dayes warnynge & also to be of good behavvour, and not to departe withoute lycence out of the realme.

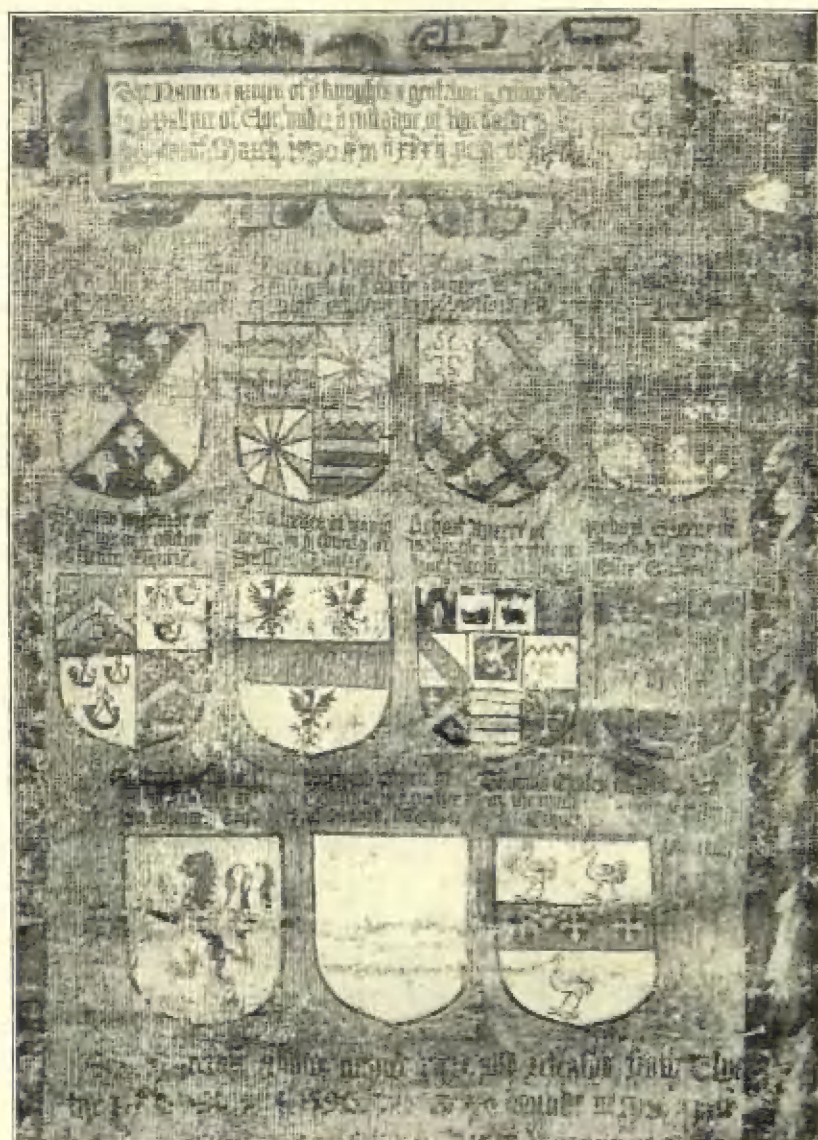
The heading of the third panel reads :

The names & armes of y^e Knyghtes & gentelmen comyted prysoners
 [. . . Richard Flynnes Esquyre B]roughton in y^e coūtie
 [of Oxford] of her maiestyes
 rayne.

Below are the fourteen shields of arms, arranged 4, 4, 4, 2, of Sir Thomas Fitzherbert, Sir William Catesby, Sir Alexander Culpeper, William Browne of Elsing, co. Norfolk, John Talbot of Grafton, Wores., William Tyrwitt, Thomas Throgmorton of Coughton, Ferdinando Paris of Linton (Cambs.), John Thimbleby, Edward Sulyard, John Townley, Samuel Loame, Jervas Pierrepont of Holmepierpoint, and John Gage of Haling, Surrey.

The memorandum is appended :

¹ The pillar to the left is surmounted by a shield of the arms of Arkenstall, *ermine a fess between three martlets sable*.



COUGHTON PAINTED CLOTH. ARMORIAL PANEL (NO. 2) IN BASE

Thes gentelmen were
realesyd from Broughton
y^e day before mencyoned
w^t lyke bondes & condy-
cyons as before

The heading of the fourth panel is

The names & armes of y^e gentle[men Committed prisoners for recusancye]
to [y^e] Pallace of E[ly u]nder y^e custodye [of Wylliam] Medley¹ E[squier
y^e . . .] of September 1592 in the xxxiiij yere of her maiestyes rayne

The eleven shields that follow are arranged 4, 4, 2, 1. The arms are much defaced, but can be identified as those of Sir Alexander Culpeper, William Browne of Elsing, Ferdinando Parys, John Thimbleby, Edward Sulyard, Sir John Arundel, Samuel Loame, Gervase Pierpoint, John Talbot of Grafton, and John Leeds. The last shield is painted white, but has over it the name of Thomas Gawen of Norrington, Wilts. An inscription on either side of it reads:

These gentelmen were released from Elye the
4th day of [? February 1592] w^t lyke bondes [& condycyons]
as before

The fifth panel contains

The names & armes of y^e gentelmen comytted prisoners for
Recusancy to y^e Castell of Banbery in y^e county of Oxford under
the custody of S^r Rychard Fynes & S^r Rychard Cope Knyghtes
y^e ix of September 1592 & in y^e xxiiij yere of her maiesties rayne.

The nine shields (4, 4, 1) that follow are those of Thomas Throckmorton, Michael Hare, John Draycott, George Cotton (no arms), Thomas Wilford, William (?) Apryce, Gilbert Wells, a blank shield with name defaced, and Thomas Craley.

A partly obliterated note is appended:

Thes gentelmen were also [released from Banbery]
castle the fourth daye of
. a pece to be
warnynge geven, w^t lyke

The sixth panel contains:

The Names & armes of y^e gentelmen comytted prisoners to the pallace
of² for recusancy under y^e custody of S^r Jhon Hygham³ of Barrowe in y^e
countie of Suffolke Knyght y^e xxiiij of March 1593 & in y^e xxxvj yeare of
hyr maiesties rayne.

¹ On the top of the pillar to the left of the panel are the arms of Medley, *barry of six silver and sable and in chief three sable mullets*.

² Ely omitted.

³ The shield surmounting the pillar to the left bears the arms of Higham, *quarterly, 1 and 4, sable a fess between 3 horses' heads razed silver; 2 and 3, gules a chevron engrailed ermine between three silver falcons displayed*. Over the shield is 'Sir John Higham Knyght.

The shields are arranged 4, 4, 4, 1, and contain the arms of Sir Alexander Culpeper, William Browne of Elsing, Michael Hare of Brusyard, John Draycott of Bensley (defaced), John Thimbleby, Henry Karvel, John Townley of Townley (defaced), William⁽²⁾ Aprece, Samuel Loame, Thomas Craley, and Ger-vase Pierpoint of Holmepierpoint. A note is appended :

Thes gentelmen weare also releasyd from Elye palace
 1594 and weare bound in
 & w^t the lyke condycyons

The seventh and last panel purports to contain

The names & armes of y^e gentelmen, Comitted prisoners for Recusaneyte to y^e Castell of Banberye, under y^e eustodye of Rychard Fynes & Anthonye Cope Knyghtes y^e xxiiij of March in y^e xxxvj yeare of the rayne of our soverayne lady quene Elyzabeth.

Eight shields follow, in two rows of four each, for John Talbot of Grafton, Thomas Throgmorton of Coughton, John Arundell of Lanherne, John Leedes, Thomas Wilford, Gilbert Welles, Richard Owen (blank shield), and Thomas Gawen (blank shield).

Beneath is written :

Thes gentelmen above named weare aboute
 the [. releasyd] from Banberye Castell
 wyth bondes and condycyons as before.

It will be seen that the cloth commemorates in some way those recusants who were imprisoned from time to time during the later years of the reign of Queen Elizabeth in the Palace of Ely, and the castles of Banbury and Broughton, but the immediate connexion between them and the church and monastery of Ely is not apparent. Most of the persons whose arms and names occur on the cloth are contained in the list of recusants 'appointed to remaine at Elie under the chardg of Mr. Arkenstall', and of those 'committed to the charge of Richard Fynes, esquier, to be kept at Banbury or Broughton' given in the Acts of the Privy Council for 13th March 1589[-90]."¹

Rev. EVELYN WHITE agreed with Mr. Hope that the painting was by the same artist as the *Tabula* at Ely, and pointed out certain resemblances. Many painted cloths mentioned in inventories had now disappeared, and the condition of the specimen on exhibition showed how frail they were. He thought the Throckmortons were mentioned in an account of the faction at Westbury Castle.

¹ *Acts of the Privy Council of England*, N. S. xviii. (ed. J. R. Dasent, 1890), 415.

Rev. J. H. POLLEN drew attention to the Resurrection at the top of the cloth, which was meant to give the key to the whole painting. Perhaps there was a reference to King James's negotiations with the Roman Catholics about 1596 in case of Elizabeth's death, and also to Essex's risings. Catesby, whose arms might appear on the cloth, took part with Essex, and began the ferment that led to the Gunpowder Plot.

The CHAIRMAN dwelt on the historical value of the painting, and expressed the indebtedness of the Society to Mr. Rosenheim and Mr. Hope for their laborious and successful restoration of the colouring.

F. H. T. JERVOISE, Esq., F.S.A., exhibited an embroidered hanging consisting of (1) an achievement of the pale arms of Jervoise (*sable a chevron between three splayed eagles silver*) and Paulet (*sable three swords with gold hilts in pile, a crescent for difference*), with helm and crest (*a boar's head sable*) and mantling, beautifully worked in gold and silver on a ground of fine green velvet, enclosed by (2) a broad border of flowers executed in wool-work, probably *temp.* Charles I. The armorial part is, however, earlier, and commemorates the marriage of Sir Thomas Jervoise in 1601 with Lucy, eldest daughter of Sir Richard Powlet, of Herriard, Hants.

Thanks were ordered to be returned for these communications and exhibitions.

THURSDAY, 23rd JUNE, 1910.

CHARLES H. READ, Esq., LL.D., President, in the Chair.

The following gifts were announced, and thanks for the same ordered to be returned to the donors:

From the Governors of the Worshipful Company of Leathersellers:—
A history of Colfe's Grammar School, Lewisham, with a life of its founder. By Leland L. Duncan, M.V.O., F.S.A. 8vo. London, 1910.

From the Author:—The Fordham brass of Kelshall, Herts. By Sir George Fordham (reprint from *The Antiquary*, June, 1910).

Letters of acknowledgement were read from the Archbishop of York, the Town Clerk of York (on behalf of the Lord Mayor and Corporation), and Sir C. A. Cripps, K.C., of a copy of the Society's Resolution of the previous meeting with reference to the proposed destruction of Christ Church, York.

The PRESIDENT announced that the Council had granted a retiring pension of £250 a year to Mr. W. H. St. John Hope on his retirement, at Michaelmas, from the post of Assistant-Secretary, after twenty-five years' service.

Also that Mr. Hugh Sadler Kingsford had been appointed Assistant-Secretary in the room of Mr. Hope.

W. H. St. John Hope, Esq., M.A., Assistant-Secretary, and Mill Stephenson, Esq., B.A., F.S.A., submitted a Report on Excavations about the site of the Romano-British town of *Calleva Atrebatum*, at Silchester, Hants, in 1909.

The work of excavation extended from 21st May to 20th November, and was supervised and directed by Messrs. Mill Stephenson and J. Challenor Smith.

The first work undertaken was an examination of the city ditch at the south-west angle of the wall. The cutting proved the existence of two ditches, the one nearer the wall being V-shaped, the outer one being of a shallow saucer shape. The trench was then carried through the dead ground between the city wall and the great outer mound known as 'Rampiers', and finally through the great mound itself, a distance of nearly a thousand feet. A second cutting was also made through the outer earthwork at a point further to the east, and three other cuttings at points on the north-west. These cuttings proved the outer earthwork to be entirely made of gravel, but nothing was found therein to throw any light on its age, though there was evidence that the sides had been used for interments during the Roman period. The ditch on the outside of this earthwork varied considerably in depth: at one point it had been carried down to a depth of 11 feet, but nothing was found in it except a few fragments of very rotten pottery.

About a dozen sections were made through the city ditch at various points, and in all cases the two ditches were found. The inner or V-shaped ditch appears to belong to the period of the inner bank, and to have been filled up when the outer one was dug, possibly at the time of the erection of the wall. A section on the west side revealed the curious fact that the wall at this point was built over an old ditch or pond. The excavation was carried down on to the sides of the wall, but was much hampered by water. A fair quantity of pottery, including Samian ware, was found in this old ditch or pond, and also various other small objects.

At the gates the ditches appear to have been crossed by bridges, at any rate at the north and south. The approach to the west gate could not be investigated owing to the modern road, but trenches cut at the sides showed the ditches to be continuous.

From the main west gate to the lesser west gate there were appearances of a road having been made over the filled-in V ditch. Pits were found just outside both the north and west gates of earlier date than the wall, showing that the town at first included all the land within the outer entrenchment.

The filling in of the *basilica* and *forum* and of the ruined house on the north side was finished during the winter, so that the whole site of the city is now levelled and again returned to cultivation.

J. B. P. KARSLAKE, Esq., M.A., F.S.A., also submitted some remarks on certain discoveries made by him in the area without the wall of *Colleva* and in the earlier mound encircling the site.

The PRESIDENT said that parting with Silchester was a sweet sorrow, and regretted that all who had been concerned in the excavation had not lived to see the completion of twenty years' work. An enormous amount of interesting detail had been brought before the Society in the annual reports, and it remained to find some one to co-ordinate this material and produce a monograph on this unique site. It was much to be desired that the discovery and excavation of the cemetery would form an epilogue which would solve some of the problems presented by the excavated town. The report of last season's work was not conclusive, but contained some points of special interest. The kiln was a great discovery, and the shoring-up of the rampart with stone walling reminded him of the pre-Roman village at Glastonbury. There were some indications of a Celtic population at Silchester, and it was a pity that the hut-circles between the two ramparts could not be systematically explored. The Society would take this opportunity of expressing its gratitude to all who had taken part in the exploration of Silchester, and congratulate those gentlemen and themselves on the successful completion of an arduous undertaking.

Mr. MILL STEPHENSON said that the Society was also much indebted to Mrs. Thorold, of Silchester Hill, for permission to excavate on her property at Silchester.

Mr. REGINALD SMITH inquired whether it was possible to give the relative date of the pairs of pits flanking two of the city gates: their symmetrical position suggested that they were sunk after the building of the wall and gates, but their use in that position was not apparent. The burials in the inner slope of the rampart discovered by Mr. Karslake were certainly cremations, but curiously unlike Roman burials of the early Empire, and were probably Celtic. The pottery from the kilns closely

resembled in paste and profile that from a kiln excavated a few years ago at Farnham, Surrey,¹ where a perforated base of hard grey ware, like that exhibited from Silchester, was found, and subsequently given to the British Museum. Other specimens found exact parallels on a first-century site at Cobham, Surrey,² where coarse and apparently native ware occurred in shallow pits with hard grey Roman pottery. The fragments of creamy ware resembled that made in considerable quantity at Rheims in the Roman period, and the brooches dated from the first two centuries, but the duration of the Roman town could best be determined by the contents of graves yet to be discovered.

The Silchester Report will be published in *Archaeologia*.

The Rev. W. M. NOBLE, B.A., Local Secretary, communicated the following note on the discovery of an ancient boat at Warboys, Hunts.:

“On the last day of March, 1910, a discovery made some years ago was carefully investigated.

In digging gault with which to clay a field in Warboys fen, the workmen discovered an ancient boat; it was decided to examine the find in December last, but the weather being unpropitious work was suspended till the above-mentioned date, when the water having been pumped out of the pit which had been dug, the clay inside and around the boat was removed.

Mr. W. H. St. John Hope, of the Society of Antiquaries, Baron von Hügel and the Rev. F. G. Walker of the Cambridge Antiquarian Society, Messrs. J. W. Bodger and C. Dack of the Peterborough Natural History and Archaeological Society, Mr. S. Inskipp Ladds, Dr. Fisher, and the Rev. W. M. Noble, of the Cambs. and Hunts. Archaeological Society, Mr. Harvey of Northampton, the owner of the land, and Mr. E. Taylor of Warboys, the tenant, were present.

The boat is in a field adjoining Puttock Drove in the parish of Warboys, less than a mile from Warboys railway station, and was 188 feet from the south-east boundary of the field (Puttock Drove) and 133 feet from the south-west boundary. Measurements were from the bow of the boat, which pointed south-east. The field is numbered 457 in the Ordnance Survey.

The length of the boat is 37 feet over all, and it is 3 feet 9 inches wide at its widest part (the stern) tapering to 3 feet at the bow.

It has been cut out of a solid oak tree, and has a flat bottom

¹ *Surrey Archaeological Collections*, xx. 228.

² *Ibid.* xxi. 203, pl. iii. fig. 18; xxii. 149 and 153, pl. iii. fig. 23.

3 inches in thickness; the sides are slightly curved and have a thickness of only $1\frac{1}{2}$ inch.

In places the sides have curved inwards considerably. The sides are extremely brittle, but the bottom is harder. In hollowing out the boat the workmen left ledges extending from side to side, evidently to give strength. There have apparently been seven of these, parts of four of them still remaining.

These ledges are about 3 inches wide and 2 inches high. Strong cleats were fixed in the angles between the bottom and the sides to give additional strength.

The bow of the boat pointed almost exactly south-east, and was 5 feet 2 inches below the surface of the soil, while the stern was only 4 feet below.

The 12 inches of soil at the top consist of peat artificially mixed with clay, then come 12 inches of peat, and then clay; thus the part of the boat nearest the surface had 2 feet of clay superimposed as well as the turf above that.

The question naturally arises, How long did it take for the 2 feet of clay to be deposited above the boat? And then, How long did it take for the turf to form above that?

No human remains were found."

ALBERT HARTSHORNE, Esq., F.S.A., communicated the following paper on a glass spout pot, c. 1675, which was exhibited, together with a silver example of 1702:

"Throughout the long recorded history of glass-making in England, nothing is more significant than the evidence of the influence exercised upon the *ars tam nobilis* by the Venetians. As early as 17th September, 1399, Richard II., being then in the hands of Duke Henry of Bolingbroke in Chester Castle, granted permission by letters patent to the masters of two Venetian galleys arrived in the port of London, for the passengers to sell on the decks small glass vessels and earthenware plates, duty free. This is the first intimation that we have of the advent of Venetian glass vessels to England. The glamour of the Orient was then fading away, and the much prized '*coupes de voirre à la façon de Damas*', '*à la Morisque*,' etc., with their imperfection of manufacture and beauty of enamelled decoration, were giving place to the late Gothic glass vessels of Venice.

It is gathered from the inventories of Henry the Eighth's glasses in 1542 that they were Venetian, and in the latest Gothic style, following the forms of the silver Gothic cups. As long ago as in 1454 the Venetian Inquisition of State ordered that if any glass-maker transported his craft into a foreign country to the injury of the state he should be sought out and killed. For then, as long after, '*tous les rois et princes désiraient et affec-*

taient avoir en leur royaume cette science'. Nevertheless, for the temptations were great, eight glass-makers from Murano made their way to London in 1549, and were set up by Edward VI. in the City. From henceforth the desire was strong in England to have the Venetian art permanently established in the country.

In 1575 a special licence was granted to Jacob Verzelini, a fugitive from Venice,¹ to make glass vessels in England after the Venetian manner. As early as 1586 complaints were made to the Council respecting the wasting of the woods in Surrey and Sussex by iron and glass makers. Harrison, in the same year, shows that the desire for home-made Venetian glasses had already grown up to the disuse or 'lothing' of silver. As to this feeling, the evidence of public documents may be cited. Patents were successively granted to Sir Jerome Bowes, and others, in 1592, to make glasses *façon de Venise*; to Sir Percival Hart, 1606, for the same purpose; to Sir William Slingsby, 1610, for the perfecting of coal furnaces for glass-making, particularly glasses *façon de Venise*, and other industries, and to Sir Edward Zouche, Sir Robert Mansel, Thomas Percival, and others, 1611, for drinking glasses and the further perfecting of coal furnaces. In these patents the importation of foreign glasses was rigidly prohibited. As a consequence of Percival's improvements with coal furnaces, and the closing of the pots, the proclamation touching glasses of May 23, 1615, came as a very opportune and prescient document. It prohibited the use of wood in furnaces for glass-making, and ordered it to be made only with sea coal or pit coal, or other fuel not wood, on account of the wasting of timber, the value of which for shipping is seriously dwelt upon, while the importation of foreign glass, or glasses, was absolutely forbidden.

As regards the making of glass of all kinds the country was now entirely thrown upon its own resources, and an important stand in the history of glass-making was emphasized. By the Act of 1624 monopolies of the more mischievous sort were abolished, and the granting of letters patent for fourteen years, the foundation of the present law of patents, established. It is well recorded that from 1617, when he bought out his eight co-partners, to about 1653 the whole of the glass business in England was controlled and guided by Vice-Admiral Sir Robert Mansel. In the course of that long period a great and important change had been silently taking place, namely, the gradual intro-

¹ Verzelini liked the "signori alieni" so well that he did not quit the country as his compatriots of 1551 had done. He settled in England, was naturalized 26th November, 1576, and, dying in 1606, was buried at Downe, Kent. In the chancel of that church is a brass with portrait figures half life-size representing him and his wife. For Verzelini's portrait, see my *Old English Glasses*, pl. 25.

duction of crystal or 'flint glass', which had its origin in the closed pots of Thomas Percival of about 1610, and did not arrive at what was then thought perfection until 1663; its success was signalized by a proclamation in the following year. In this document the main object was to prohibit the importation of unfinished looking-glass plates, and did not touch drinking glasses. They were now, at last, left free.

With regard to drinking glasses imported from Venice in the time of Charles II. much information has been preserved in the office copies of letters and orders, and full-sized drawings, by John Greene, a London glass-seller, and his partner Michael Mesey, sent to Signor Allesio Morelli, glass-maker in Venice, between 1667 and 1672. The number of different figures or 'forms' of glass vessels amounts to 173. It appears from Greene's letters that the relations with Venice had been carried on largely before 1667, by himself and other members of the Glass Sellers' Company. Besides the enumeration of the different glasses to be made according to the 'forms' or 'patterns' sent, the decorative fashion of others was left to the Venetians, but they were to have both 'feet' and 'ears'. Some of the vessels are marked to be 'calsedonia', 'speckled enameld', or 'milk whit'. What collector would not like to find a glass for Spanish wine in 'calsedonia' or 'speckled enameld'? The reproduction of such glasses would be a welcome relief from the shrill technical perfections of graceless modern flint glasses. But nearly all these ancient picturesque models have succumbed to 'the tooth of time and razure of oblivion'. Indeed, two centuries and a half appear to be far beyond the limit of the life of a glass vessel liable to ordinary use, and it seems only by a sort of miracle that a frail spout pot has survived from the time of Charles II.

Special instructions are given in each of the Greene Letters that the glasses should be very clear and white, and exact according to the patterns. Elaborate means were taken, as a matter of course, to defraud the Customs and evade the lynx-eyed searchers, both by measure and number of glass plates, some being hidden in the drinking-glass cases, and by false inventories or 'factorys' in the chests, and true ones sent to Greene, the cases being divided between two vessels 'for fear of the Turks', then the universal bugbears. It appears from the Greene evidences that between 1667 and 1670 this single glass-seller imported from Venice nearly two thousand dozen of glasses; what quantity his *confrères* in the glass-selling trade, Sadler, Allen, Van Mildert, and others, received from the same source we have no knowledge. The Venetian glasses are said to have been introduced to compete by their cheapness with those of English origin, and thus to stimulate home efforts. From the

time that the English flint glass improved, as was stated by Greene in 1671, the Venetian imports gradually fell away.

The figures shown by Greene's outlines divide themselves naturally into wine glasses, beer glasses, and sundry glass vessels. Of the former, the speckled enamelled glasses for French and Spanish wine are the most interesting. Among the sundry glasses the porringers, or posnets, in two sizes, with ears and handles, are most conspicuous. They were, together with the vessels for beer, necessary concessions to the English taste, and their capacity must have sorely puzzled the abstemious Venetians. Then come the fountain pots for refreshment by suction, the nests of bowls, the covered cups, beakers, flower-pot glasses, and gimball flasks, etc. ; and finally we reach the spout pots, of which an example is now shown. Such a vessel appears among Greene's forms. And with respect to the more ornamental of the glasses he but rudely suggested in the 'forms' what was beyond his power to draw, adding by letter that they were to be 'of good handsome fashions'. The ornamentally pinched, denticulated, quilled, spun, and other artistic work was, therefore, a free rendering of Greene's pen-and-ink crudities by long-descended artists practising the traditional methods of work in the manner for which they knew their material to be best suited. The handles or 'ears', spout, and fluted foot of the spout pot fall into this category.

With regard to the character of the metal, it is at once apparent that its nature is very different from English glass objects of the same time. The material is light, of a cold white hue, and suffers from what was described at the time as 'that unpardonable fault called crizzling', or clouding of its transparency, by a sort of devitrification of surface. A similar condition attaches to a plain drawn drinking glass in the cabinet of the writer, which corresponds exactly with one of Greene's forms, heretofore a solitary instance of identification, showing what care was taken to carry out the English instructions.

The Immortal Dreamer had an earthenware spout pot in the 'Den' at Bedford, and the form and application continued long after in silver for the use of old people and invalids, as well as in glass, down to at least the middle of the eighteenth century, after the fashion of the example shown by our Fellow, Mr. Crowther-Beynon. The silver spout pot is of the year 1702. It has descended to the writer, with other plate, from an ancestor, John Postlethwayt, D.D., chief master of St. Paul's School from 1697 to his death in 1713.

It remains to add that for the greater part of the above information the writer has drawn upon a work on Old English

Glasses, with the full permission of the author. He has the desire, with the concurrence of the President, to add the glass spout pot to the collections in the British Museum."

Miss NINA LAYARD, by permission of the Rev. H. R. Whytehead, exhibited a gold signet ring believed to have belonged to George Herbert.

The ring bears for device a Crucifixion placed upon an anchor, with the encircling legend

Sit fides mea sit crux . . .

It is recorded that rings with the same device were given by George Herbert to his friends.

Thanks were ordered to be returned for these communications and exhibitions.

THURSDAY, 30th JUNE, 1910.

CHARLES H. READ, Esq., LL.D., President, in the Chair.

The following gifts were announced, and thanks for the same ordered to be returned to the donors :

From the Author :—A short history and description of the parish church of Sittingbourne. By Francis Grayling. 8vo. Sittingbourne, 1910.

From F. W. Reader, Esq. :—Exploration of some 'Red Hills' in Essex, with remarks upon the objects found. By William Cole, F.L.S. 8vo. Colchester, 1906.

From the Author :—Baildon and the Baildons. By W. Paley Baildon, F.S.A. Vol. I. part i. *Privately printed*. 4to. n.p. 1910.

From H. St. George Gray, Esq. :—The gold torc found at Yeovil, 1909. Report of coroner's inquest and copy of the inquisition, etc. fol. n.p. 1910.

From the Author :—The Comacines, their predecessors and their successors. By W. Ravenscroft, F.S.A. 8vo. London, 1910.

Edward Thurlow Leeds, Esq., B.A., was admitted Fellow.

The following letter was read :

Home Office,
Whitehall,
25th June, 1910.

SIR,

I am directed by the Secretary of State to inform you that the Address of condolence of the President, Vice-Presidents,

Council and Fellows of the Society of Antiquaries of London on the death of His late Majesty King Edward the Seventh has been laid before Queen Alexandra, whose Thanks I am to convey to you.

I am, Sir,

Your obedient Servant,

EDWARD TROUP.

The Secretary,

Society of Antiquaries of London,

Burlington House,

Piccadilly, W.

The following letter was also read :

17 Stonegate, York,

June 25, 1910.

DEAR SIR,

Many thanks for so promptly sending me a copy of the resolution of your Committee. It appears to-day in the *Yorkshire Herald*, and I think will do good. If you see any chance of stirring them up further we should be obliged. The next move on the part of the Streets and Buildings Committee will very likely be the destruction of Queen Margaret's Arch, but if this takes a concrete form, we will write and rely upon your co-operation.

Yours truly,

T. ANDERSON.

C. R. Peers, Esq.,

Society of Antiquaries,

Burlington House, W.

HOWARD HURD, Esq., submitted the following notes on the discovery of an Anglo-Saxon burial ground at Broadstairs; and by permission of Miss Bartrum exhibited a selection of the objects found.

"In February last, during the making of a private roadway leading to a new school at Dumpton Park Drive, Broadstairs, a number of Anglo-Saxon graves were discovered on the removal of the top soil to a depth of about 12 inches. They were situated on rising ground about 330 yards from the sea, being dug in the chalk subsoil, and were of varying dimensions. Two were unusually long, namely, 9 feet and $8\frac{1}{2}$ feet respectively, whilst the smallest was only $4\frac{1}{2}$ feet in length. They varied from 2 to 3 feet in width, and $1\frac{1}{2}$ foot to 3 feet in depth.

In most of the graves the bodies had been interred with the head towards the west or north-west (see plan, fig. 1), but in two

instances the skulls were in the middle, and apparently the bodies were buried doubled up. The bones generally were in a very decayed state, except one or two skulls, with perfectly preserved teeth. In several graves the remains had almost altogether disappeared.

One grave contained a pale green drinking glass, $7\frac{1}{2}$ inches high (fig. 2); also two pairs of small bronze tweezers; two bronze

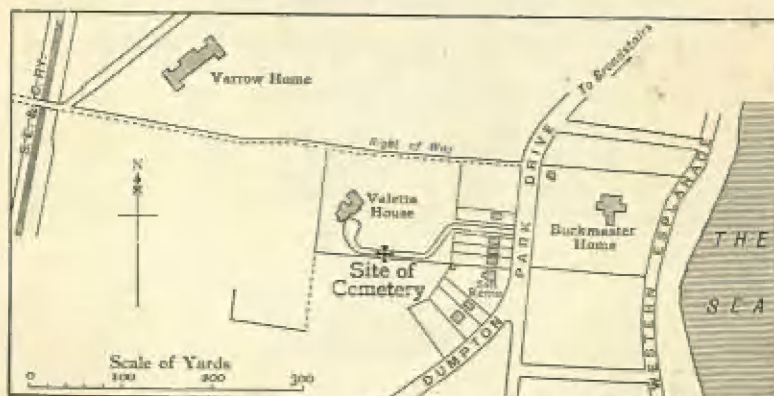
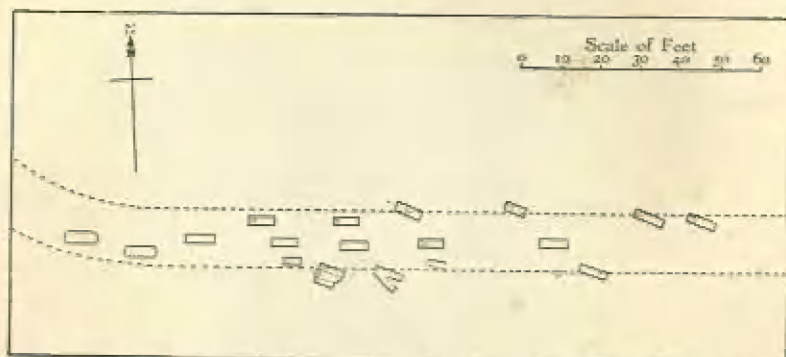


Fig. 1. PLAN AND POSITION OF ANGLO-SAXON CEMETERY, BROADSTAIRS.

ring-brooches, $1\frac{1}{2}$ inch diameter, of thin metal (pins missing); a black and white glass bead, and a fragment of leather with ornamented silver foil attached. The drinking glass is well made, and decorated with lobes, with the typical small foot. It may have been imported from the Rhine, as the art of glass manufacture gradually declined and wellnigh died out in Britain after the break-up of the Roman Empire.

At the foot of another grave was an urn (fig. 4) of dark-grey ware, with small stamped markings round the upper part, and bosses. It had collapsed under the weight of the chalk débris used for filling the grave, and was badly broken, but has since been restored by an expert. The ornament appears to be of Frankish origin, and is therefore of interest as showing contact with the Continent at that period.



Fig. 2. GREEN GLASS BEAKER, BROADSTAIRS ($\frac{1}{2}$).

One grave, about 5 feet long, perhaps that of a young person, was of a particularly interesting character, containing seven beautiful amethyst beads, of graduated sizes, somewhat pear-shaped, ranging from $\frac{3}{8}$ inch to 1 inch in length; five glass beads of assorted colours, blue, green, and red; four small white beads, apparently formed of fossil encrinites; a silver-wire ear-ring $\frac{1}{2}$ inch in diameter; a small iron knife, and an iron latch-key or

girdle-hanger, the two last articles being in a very corroded state. It may be mentioned that while uncovering this grave, a piece of Roman brick, several fragments of Roman tiles, and some small pieces of sandstone were unearthed.

Another grave yielded a fine collection of beads, fifty-nine in number, composed mostly of amber, and many of glass. The amber ones were in a good state of preservation, and are slightly conical in shape, being four-sided, and tapering towards the top. They were of various sizes from about $\frac{3}{8}$ inch to nearly an inch in length. The glass beads were circular in form, of a light and dark green colour, and also several shades of red. Two of them had a pattern of thin red, yellow, and black lines alternating. It should be noted that forty-six of the beads were near the head of the remains, eleven round the right arm, and the remaining two, both very large, near the waist. In the same grave was a bronze buckle about $1\frac{3}{8}$ inch long with an iron pin, also a fragment of a small iron brooch about $\frac{1}{2}$ inch in diameter, and a small iron knife.

Amongst the graves there was one of unusual shape, which is specially deserving of notice from the fact that three bodies had been interred therein, apparently two adults and a child, all side by side, the chalk being scooped out to receive the head of the middle body. The personal ornaments consisted of a circular garnet brooch (fig. 5) about an inch in diameter, the metal being bronze; a bronze wire bracelet, two iron rings about $1\frac{1}{2}$ inch in diameter, a bronze ring-brooch of thin metal (pin missing), with a fragment of iron attached to same; about 100 beads, principally of glass and many of amber, ranging in size from $\frac{1}{8}$ inch in diameter to about $\frac{5}{8}$ inch in diameter. Most of these articles were found in association with the remains of a child, as was also a tiny bronze band which had originally been fastened by means of small bronze rivets to a little wooden bucket about 4 inches in diameter.

In another grave was found a fine specimen of a spear-head about 24 inches long, but in a very corroded state, also a small bronze buckle and a pair of bronze tweezers. In nearly all the graves of what were presumably males there were found traces of spear-heads and knives, but in many instances they were corroded through long contact with the soil.

The garnet brooch above referred to is, in the opinion of Mr. Reginald Smith, of the early Jutish type, probably about A. D. 500, and it may be fairly assumed that the other articles are contemporary with it. Unfortunately, owing to unavoidable circumstances, the surrounding ground in the neighbourhood of these graves was not explored, for it is highly probable that there are other graves there which have not been brought to light.

There were indications of the existence of some trenches beyond the area excavated for the purpose of making the roadway which led to the discovery of the graves mentioned in this paper. It may be of interest to observe that the site is about $2\frac{1}{2}$ miles, in a north-easterly direction as the crow flies, from the well-known Anglo-Saxon burial-place at Ozengell, Thanet."

Mr. REGINALD SMITH added the following notes on the remains found at Broadstairs :

"The Isle of Thanet is, and ought to be, rich in remains of the early Teutonic invaders of England, and Mr. Hurd's previous communication to this Society showed that remains of a still earlier period only await excavation in the same district. It is to his enthusiasm and the kindness of Miss Bartrum, the owner of the site, that we owe this latest addition to the Anglo-Saxon finds in Kent ; and it would be gratifying to know that another cemetery of the period, discovered in 1907 at Folkestone, had also been put on record.

The graves of men are generally distinguished by weapons, but no swords or daggers were found on the present site, and the spear-heads were nearly destroyed by rust. Four rivets of bronze with disk heads $\frac{1}{2}$ inch across had passed through material $\frac{3}{8}$ inch thick, and no doubt belonged to a shield of wood or hide, but there are no shield-bosses from this site, and time has dealt hardly with the other relics of iron. Crouching burials are not uncommon in Anglo-Saxon cemeteries, and for displaced skulls reference may be made to the burial-ground on White Horse Hill, Berks.¹

Beads are ordinarily found in the graves of women, either as necklaces or bracelets, and the Broadstairs series, though not extensive, includes specimens of some interest. The majority are of amber, roughly shaped and now dulled and opaque on the surface : one large drum of this material, probably for the centre of a necklace, measures $1\frac{1}{2}$ inches across and is 1 inch thick. Though amber is found in its natural state on the east coast of England, the most productive districts then, as now, were the west coast of Jutland and the southern Baltic, the early homes of our Teutonic invaders.

Self-coloured beads of translucent glass were of pale amber, and others more or less opaque were of dull red, pale green, and dark blue. There were several cylinders about $\frac{3}{4}$ inch long of pearly glass, some with transverse ribs ; but pearls on a larger scale were represented by a number of double and one triple bead of a type somewhat rarely found, but known from Newnham and Marston St. Lawrence (Northants), Bassett Down (Wilts.), and

¹ *Vict. Hist. Berks.*, i. 247.

Driffield (Yorks).¹ The larger and more ornamental varieties of opaque glass were scarce on this site, but there was one black cube with applied yellow lines; one red cylinder with yellow feather markings;² and two black beads with white chevrons.³ It is worthy of remark that no example of the common Roman melon-shaped bead of opaque turquoise glass came to light at Broadstairs; but there were seven amethyst beads, $\frac{1}{4}$ to $\frac{1}{2}$ inch long, of the type so frequent in the richer Anglo-Saxon graves of Kent.

A bracelet of bronze wire and an earring of silver wire both had the slip-knot frequently found at this period; and there were three pairs of tweezers; one $3\frac{1}{2}$ inches long with the usual cross-lines below the loop, and another still retaining its ring for suspension at the waist. These toilet implements are frequently found in England both in Roman and Saxon times, but they are not known to be confined to the graves of one sex,⁴ nor is their use quite certain. They have been supposed to be depilatories, and it has even been suggested that they were used to draw the thread through fabric in sewing, but the needle was well known, and it may be that their chief function was to extract thorns from the skin. It is stated by our Fellow, Colonel Rivett-Carnac, that in the provinces of Kumaon and Garhwal on the Tibetan border the Himalayan mountaineers carry not only a flint and steel but also three small toilet implements attached to a chain: a pair of pincers for extracting thorns, a spoon-shaped implement for the ears, and a small toothpick. These articles have been found in sets more than once in Anglo-Saxon graves,⁵ and examples from Kertch, Crimea, have recently been acquired for the British Museum.

The buckles found were mostly imperfect, but include one exceptional specimen (fig. 3) of oblong form, 1.1 inches long, with a sunk panel round the hoop filled with a figure-of-eight pattern in relief, which suggests an imitation in the solid of gold filigree work.⁶ There were two oval buckles of bronze and one of iron, one square bronze specimen with a row of dots, and one plain oblong; also one example of the heavy type frequent in Kent and the neighbouring parts of the Continent, with the root of the

¹ *Vict. Hist. Northants.* i. 331, 336; *Wilts. Arch. Mag.* xxviii. 107; Mortimer, *Forty Years' Researches*, figs. 703, 851, 865, 884, 888. Frankish examples of both forms in Boulanger's *Mobilier funéraire gallo-romain et franc.* pl. 27.

² Marked like one from Ipswich, *Archæologia*, lx. pl. xxxiii, middle of second row. ³ *Ibid.* second from left in second row.

⁴ One pair was with a spear in a warrior's grave at Broadstairs.

⁵ *E. g.* at Leicester: *Vict. Hist. Leics.* i. 229.

⁶ A circular garnet brooch of twelve rays from Cléry, Somme, has this design repeated in the centre in filigree (*Bulletin archéologique*, 1907, pl. iii, fig. 3); and other relics found in the same grave point to about A.D. 500.

tongue expanded and shaped.¹ Another specimen was of horse-shoe form with bar and iron tongue, the hoop engraved with chevrons. With the buckles should be mentioned a solitary shoe-shaped stud with pierced shank, of a pattern usual in Kent and Northern France, where a buckle has been found attached to the belt by a number of these studs.² Probably attached to the girdle were iron rings, of which three rusted iron specimens were found, about $2\frac{1}{4}$ inches across. Of the same material were two small knives, such as are generally found in the graves of either sex, and were carried for use at table; also a latch-key or girdle-hanger in an imperfect condition, but no doubt originally attached to the waist-belt by a ring. Two examples of bronze and one of iron were found together in a grave at Sarre,³ another early settlement in Thanet.

The vessels recovered are more interesting than numerous, and the urn (fig. 4) has been happily restored, its height and diameter



Fig. 3. BRONZE BUCKLE, BROADSTAIRS (1).

being 8 inches. In shape and ware it resembles an Anglian cinerary urn, but was not intended to hold the ashes of the dead, and must be regarded as an accessory vessel, placed in the grave to contain food for the journey to the other world, or perhaps as a reminiscence of the rite of cremation. The five slight protuberances, formed by pressing out the clay from within before firing, seem to mark an early stage, as the knobs were much developed elsewhere; but the neck preserves the Roman tradition, and the ornamentation consists of two pairs of wavy lines formed of small squares impressed with a tool, and groups of four similar stamps in the bends. This kind of decoration occurs in Kentish graves on earthenware bottles of reddish ware,⁴ but is closely allied to the stamped pottery of Northern France.⁵

¹ Cf. *Vict. Hist. Kent*, i. 390, fig. 3, where this type is shown with plate complete.

² Moreau, *Caranda*, ii. pl. 10, nouvelle série; Lindenschmit, *Handbuch der deutschen Alterthumskunde*, i. 361, fig. 308.

³ *Archaeologia Cantiana*, vi. 175.

⁴ *Ibid.* vii. pl. x, grave ciii.

⁵ The same shaped bottle with this ornamentation has been found at Cléry, Somme (*Bulletin archéologique*, 1907, 25, pl. vii, fig. 4); and another from Pont-à-Vendin, Pas-de-Calais, is in the Cinquantenaire Museum, Brussels.

An interesting fragment probably belonged to a beaker formed of metal plates lined with silver foil on which a pattern can still be traced, and covered with thin wooden staves secured by bronze rivets, of which three remain in position, their domed caps being also preserved.¹ The bronze mounts of a bucket of more usual form were also found, with a diameter at the top of $3\frac{1}{2}$ inches, the bronze hoop being $\frac{3}{8}$ inch deep, and originally fixed by six rivets. There were further found five triangular plates of thin bronze with embossed pattern and pearly edges, that were fixed outside the bucket below the lip. This arrangement is common



Fig. 4. POTTERY VASE, BROADSTAIRS (4).

on buckets and drinking-horns of the period, and is well illustrated in the Taplow burial.²

The most attractive and best-preserved relic from the cemetery is the lobed glass beaker (fig. 2), which belongs to a well-known type; but though a large number have been found in England and abroad, it is not yet ascertained where they were manufactured.³ In this country they are practically confined to

¹ *Arch. Cant.* vi. 167, where a bronze rim $3\frac{3}{4}$ inches in diameter is figured, with a rivet surmounted by a garnet.

² *Vict. Hist. Bucks.*, i. 203 and coloured plate.

³ Albert Hartshorne, *Old English Glasses*, 119, reviewed in *Archæological Journal*, liv. 418; Edw. Dillon, *Glass*, 111.

Kent, but specimens, entire or in fragments, have been found in Surrey, Hants, Berks., Glos., Bucks., Cambs., Northants, and as far north as co. Durham. On the Continent several have been found in Normandy and Rhenish Hesse, and the usual colours are amber and green, though blue is exceptionally found. The present example is green, $7\frac{1}{2}$ inches high, and ornamented with eight partly hollow lobes or claws in two equal tiers, the wall of the cup being drawn into the mouth of the lobe in each case. Below the lip and above the base are thin spiral threads round the body, as usual in this type, which always has a small foot.



Fig. 5. GARNET BROOCH, WITH SIDE AND BACK VIEWS, BROADSTAIRS (†).

Of the brooches found one is apparently of Roman origin, consisting of a flat crescent of bronze (now imperfect) with an inordinately long iron pin (evidently not original) at the back, retaining marks of fabric. Such stray survivals from Roman times¹ are not uncommon, especially in Kent, but do not afford much information, nor do the annular bronze brooches, of which four specimens were found. One was larger than the rest, and was linked in a ring of bone which also bore an impression of cloth. Two of the others were a pair, broad in proportion, with small holes for the pins (now missing). This type is found in most of the Anglo-Saxon cemeteries, and was derived from a Roman prototype. On the other hand, the garnet brooch (fig. 5) from Broadstairs belongs to a purely Gothic type, and in this country would not be expected in England outside the Jutish

area of Kent and the Isle of Wight, though fairly plentiful abroad. It is a bronze disk $\frac{3}{4}$ inch across, set with eight wedge-shaped garnets in cells round a sunk centre with a geometrical design in silver filigree. The garnets are backed by silver foil which is cross-hatched in some cases, plain in others. This style of jewellery dates from the earliest Teutonic period in England, and evidently preceded the long series of brooches set with isolated wedge-shaped garnets that characterize the Jutish graves of Kent. A very similar brooch with ten garnets was found in the Sarre cemetery,² and others in the Isle of Wight and at Herpes, Charente,³ where a small group of ornaments evidently imported from

¹ An enamelled example (pendant) from France is figured by Boulanger, *Mobilier funéraire gallo-romain et franc*, pl. 27, fig. 14; and a brooch of thin bronze from London is in the British Museum (Roach Smith, *Illustrations of Roman London*, 126).

² *Arch. Cant.* vi. pl. vi, fig. 8, p. 179.

³ *Bulletin et Mémoires de la Soc. arch. et hist. de la Charente*, 6th ser. i. 181.

England can easily be distinguished from local productions. The Sarre example was found with a skeleton laid with the head at the east end of the grave, contrary to the rule in Kent¹; and the excavator, our late Fellow Mr. John Brent remarked: 'from the position of the skeleton and the type of the relics I am inclined to class this grave with no. lxxxv as one of the earliest which we opened.' A French authority assigns similar brooches found in Normandy to the early years of the Frankish invasion,² which was mainly conducted by Clodion between 440 and 452. With this opinion I entirely agree, and proceed to notice some other striking similarities between the finds from these two cemeteries. Besides the cases already given, there may be mentioned the occurrence in both of tweezers, ring-brooches, amethyst beads, double pearl beads, lobed glasses, shoe-shaped studs, and heavy buckles, one of which was found with a lobed glass at Sarre.³ The deduction is fairly obvious that the Broadstairs graves correspond to the earliest period of the Sarre cemetery, and belonged to the same Teutonic people, Sarre being between eight and nine miles inland from Broadstairs, at the south-west angle of the Isle of Thanet and just half-way on the high road to Canterbury. If the Broadstairs burials were dated about A.D. 500 (and rather earlier than later), ample time would be allowed for the development of the elaborate jewelled brooches characteristic of the later Jutish cemeteries; and the importance of the Broadstairs series therefore lies not so much in its intrinsic value as in the additional means it affords of distinguishing early and late types in the extensive finds at Sarre."

The PRESIDENT remarked that finds of this period were specially interesting as bringing before us the beginnings of mediaeval art. Though its classical origin had been traced, Anglo-Saxon art was more intimately related to what followed. Thanet, and Kent generally, gave us the best examples of the period, and the Society was indebted to Mr. Hurd for recovering and reporting on these and still earlier remains in Broadstairs. Small as the exhibition was, it raised questions of far-reaching interest. The manufacture of such glass vessels, for instance, implied great dexterity on the part of the glass-blower, as it was a difficult matter to preserve the form of the body while the lobes were added to it. Though made possibly on the Rhine or Meuse, these lobed cups

¹ The heads lay north or north-west in the Broadstairs cemetery, which evidently dates from the pagan period. For orientation in Kent see *Viet. Hist. Kent*, i. 367 (a similar early case on Tremworth Down).

² Boulanger, *Mobilier funéraire gallo-romain et franc*, pl. 21. His figures show a similar design in the centre. For date, see also Barrière-Flavy, *Arts industriels des peuples barbares de la Gaule*, i. 113.

³ *Arch. Cant.* vi. 171; vi. 164, and vii. 321; iii. pl. ii; vii. pl. vii. grave lv; vi. 168, fig. 3; v. 313, and vi. 168.

might subsequently have been produced in England, and more probably in Kent than elsewhere. The development of Anglo-Saxon brooches was also an interesting and fruitful subject, the circular specimens of Kent reaching a higher level than contemporary forms on the Continent. This of itself would justify an Englishman in devoting special attention to this class of antiquities.

G. W. ABBOTT, Esq., and REGINALD A. SMITH, Esq., B.A., F.S.A., communicated an account of a discovery of neolithic pottery and Bronze Age drinking-cups found in prehistoric pits at Peterborough.

The ancient excavations, which could be seen in section along a gravel-pit, varied in dimensions, but were of two kinds: small and steep-sided with flat bottoms, or large and shallow with the bottom pointed or flat. In the latter case the pit would be saucer-shaped like the ordinary hut-circle, $3\frac{1}{2}$ or 4 feet deep, and 10 or 12 feet in diameter. The filling was reddish loamy gravel, with a greyish layer at the bottom, the smaller pits containing flint implements, charred wood, pot-boilers, and other traces of fire. At the lowest level were found fragments of a thick brown ware, ornamented outside and within the lip, and belonging to round-bottomed bowls of neolithic type. Above this level were many pieces of "drinking-cups", thinner and better made, the paste and decoration corresponding exactly to the earliest pottery of the round barrows.

Mr. REGINALD SMITH dealt more particularly with the pottery finds, and adduced several examples of the thick bowls found in England, in long barrows and the Thames. Local variations had been noticed in Scotland and Ireland, but the nearest parallels on the Continent seemed to be from Finland. The beakers were evidently later on the whole, but possibly overlapped, and were allied to recognized Continental forms, especially on the Middle Rhine. The beaker indicated a new wave of immigration, but the neolithic bowl revived, and seemed to have developed step by step into the "food-vessel" of the barrows. This was the first important find of beakers as domestic vessels in England, but two similar discoveries had been made in Haddingtonshire. The absence of metal on all three sites suggested that the beaker type arrived in Britain before the dawn of the Bronze Age.

Mr. LEEDS remarked that pottery ornamented with a design of dotted lines combined with deep circular holes, similar to some of the sherds from Wiltshire shown by Mr. Smith, was also known from Sweden. It occurred, for instance, in "habitation-areas" excavated in Uppland. These, according to Swedish antiquaries, were contemporaneous with the gänggrifter of more southerly

parts of Sweden. The gänggrifter (passage-graves) belonged to the penultimate period of the Swedish Stone Age, preceding the hällkista (rock cists) which persisted into the Bronze Age itself. Along with a remarkable series of pottery and the like from a passage-grave at Gantofta, Skåne, were found a large number of amber beads, several in the form of celts. Two of these in particular were noteworthy from their resemblance to well-known Bronze Age forms. This feature they had in common with many of the late neolithic stone implements of Scandinavia, in which the influence of bronze forms was apparent prior to the time when that metal itself came into use. It was interesting to find pottery with similar ornament in use in Sweden at a time when the coming of the Bronze Age seemed to be already heralded, although it belonged to an earlier period than the Peterborough pottery. In view, however, of the fact that northern antiquaries placed the beginning of the Bronze Age of Scandinavia slightly later than that of England, the discrepancy in date between the period during which this pottery was in use in these two areas might not be so great as appeared at first sight. It might be noted that the Scandinavian sherds also belonged to round-bottom pots.

E. THURLOW LEEDS, Esq., B.A., F.S.A., also communicated the following notes on objects exhibited by himself:

"The small pot of a late Bronze Age type and the other sherds exhibited were found in a tumulus, known as Oliver Cromwell's Hill, at Eyebury, near Peterborough. As only a portion of the tumulus has been examined as yet, it is proposed to defer a full account of the excavations until further progress has been made. The tumulus is of the round type, about 40 yards in diameter and 5 feet high at the centre. On three sides traces of a ditch were met with, containing soil which had evidently been burnt. Close to the gravel in the centre of the tumulus there were two distinct layers of charcoal, and in two places apparently remains of hearths. The small pot was found only 1½ feet down on the south-eastern side of the mound, 39 feet from the centre. In the centre itself at various depths were found sherds, some of Bronze Age forms; but a piece of a rimmed vase found at a depth of 3 feet 6 inches, about 6 inches above the first charcoal layer, appears to be of Roman date, in which case the centre of the tumulus must have been disturbed in those times, though the charcoal floors were never pierced. Bones of various animals, including sheep, pig, dog, and hare, and a large flint flake were also found."

The President pointed out that the period represented by the Peterborough finds was further removed from the Saxon period than the Saxon period was from our own. Some such measure of time was necessary for those who were not familiar with the pre-

historic periods. One curious fact about neolithic discoveries in this country was the scarcity of pottery, though it was possibly not always recognized as such when it actually came to light. A marked feature of primitive art was its conservatism; and as the natural trend of immigration was westward, it was not surprising to find an unbroken succession of forms in Ireland, while Britain was overrun with invaders introducing new types. The more precise classification and dating of early types only bore out this view of prehistoric ethnology in Britain.

Messrs. Abbott and Smith's paper will be printed in *Archæologia*.

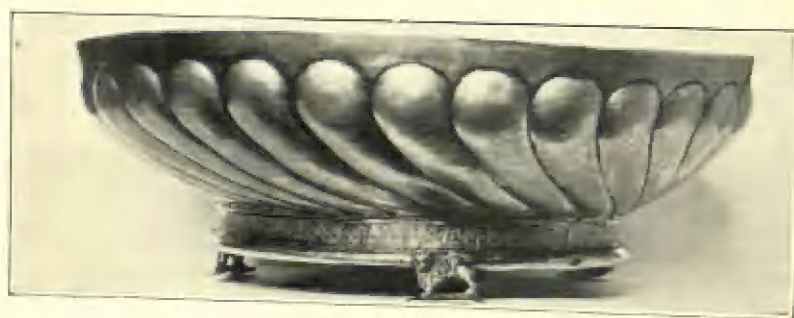
F. HAVERFIELD, Esq., M.A., LL.D., V.P., communicated the following note on the date of part of the great quadrangle of Christ Church, Oxford:

"On 25th February, 1909, I laid before the Society some evidence tending to show that the west façade of Christ Church in Oxford was not all built by Wolsey, but that the north bastion and some adjoining rooms were certainly added after his death, and were perhaps not included in his original plan. By the kindness of the Dean of Christ Church and the Rev. H. E. Salter, I have since obtained further evidence, which shows that the north bastion was in fact erected in 1668, about the same time as the north side of the Great Quadrangle, which lies immediately east of it. This evidence is contained in (1) a manuscript book written about 1670 and now preserved among the official papers of the Dean of Christ Church, (2) a copy of the same in the Christ Church Treasury, and (3), according to a statement in these two volumes which I have not yet been able to verify, in 'a book belonging to the Citie of Oxford called by the name of the least red parchement booke'. The important words are:

'After the finishing of the new Towers on the north-west side of the great Quadrangle abutting on the High street leading from Carfax towards Southbridge, viz. A^o. 1668, The wall & the kitchen & other houses belonging to one of the Canons Lodgings late in the possess: of Dr. Mayn, between the said Towers & the Gt Gate entring into the Gt. Quadrangle, were taken down & the ground laid open to the said street.'

Plainly the whole north-west corner of Christ Church was constructed about 1668. The 'Towers' are, I suppose, the two turrets which form the front of the bastion: the 'High street leading to Southbridge' is St. Aldate's, leading to what we now call Folly Bridge."

CHARLES H. READ, Esq., LL.D., President, exhibited a silver parcel-gilt bowl of the early part of the sixteenth century, on which he read the following notes:



EARLY SIXTEENTH-CENTURY SILVER PARCEL-GILT BOWL (A)

"I have ventured to bring this handsome silver bowl to the notice of the Society rather because I wish to learn something about it than that I have any information to give.

It belongs to Mr. J. Mulhall, who has kindly allowed me to show it here. The only history he has of it is that it was found in the house of an old family in the South of Ireland about half a century ago, so dirty and neglected that it had never been recognized as silver. So far, therefore, as its history goes it may be either foreign or British work. The three lion feet have perhaps rather a foreign look, and recall cups and other vessels made in Baltic cities; the border round the foot is of a pattern that I have not found on any piece of definite origin.

The workmanship of the gadrooned side is both bold and skilful, and betrays the skilled craftsman. The centre, as will be seen, is broadly convex, richly if a little confusedly embossed and chased with formal floral designs. In the centre is a 'print' of a kind typical of English mazers of the early sixteenth century, and, like many of these, it has apparently been engraved expressly for the addition of translucent enamel through which the design might be visible. At present no trace of enamel remains, and the design, a boar, is seen as it was originally engraved.

It will be noticed that the style and character of the convex centre differs very materially from those of the rest of the vessel, and the centre is moreover gilt like the edges and foot of the bowl. The work of the centre in my judgement does not show the same technical skill as the rest, and taking this into consideration with the difference of style and the absence of the simplicity seen in the bulk of the work, I was at first of opinion that the middle was a later addition. This may be the case, though it is by no means a certainty. In style it rather recalls the silver-work of European Turkey."

Miss PEACH exhibited (1) a silver signet ring of the fifteenth century, found at Beverley, with device of a crowned p; also (2) one of the silver waits' collars formerly belonging to the town of Beverley.

Of these collars there were originally three, but all were sold with other things belonging to the town in 1836. Two have since been recovered by the gift of Admiral Hotham.

The example under notice (see plate) resembles the other two in being composed of a number of tablets or links, alternately in the form of displayed eagles and beavers biting their cods, coupled together by small loops. These originally joined on to two buckles which were attached to a quatrefoil tivet with a rose in the middle, but one of the buckles is lost. From the tivet is suspended a small quartered shield of the town's arms: 1 and 4, *an eagle displayed*; 2 and 3, *barry wavy, and on a chief a beaver*.

The waits' collars were made not later than the incorporation of the town in 1573, but may be earlier.

W. R. B. PRIDEAUX, Esq., exhibited a small copper axe, probably of very early date and from Ireland, found in the roadway of Egerton Terrace, South Kensington, about 4 inches below the surface, during the present month.

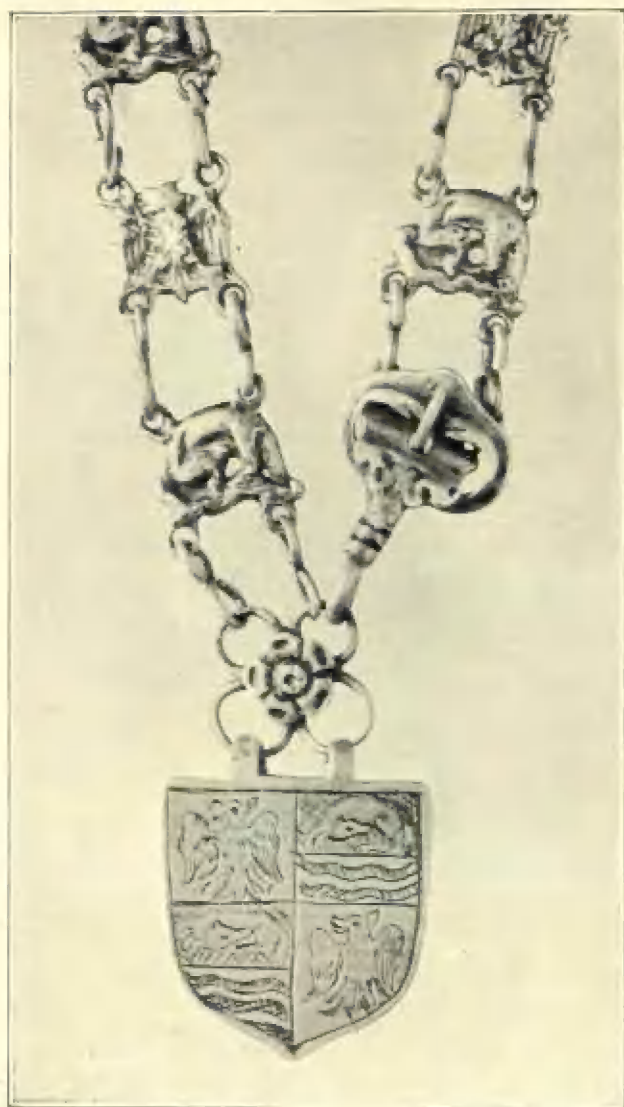


BEVERLEY WAITS' COLLAR, SHOWING ORIGINAL ARRANGEMENT RESTORED ($\frac{3}{4}$).

Thanks were ordered to be returned for these communications and exhibitions.

Special thanks were also ordered to be returned to the contributors to the Exhibition of English mediaeval alabaster work.

The Ordinary Meetings of the Society were then adjourned to Thursday, 24th November.



SILVER COLLAR FORMERLY WORN BY ONE OF THE BEVERLEY
TOWN WAITS ($\frac{1}{2}$)



THURSDAY, 24th NOVEMBER, 1910.

CHARLES HERCULES READ, Esq., LL.D., President,
in the Chair.

The following gifts were announced, and thanks for the same ordered to be returned to the donors :

From the Author :—*Cornbury and the Forest of Wychwood.* By Vernon J. Watney, F.S.A. Privately printed. fol. London, 1910.

From the Author :—*The townfields of Cumberland.* By T. H. B. Graham. 8vo. Kendal, 1910.

From the Author :—*The ancient hill-fortress of Pen-y-Corddyn, near Abergele.* By Willoughby Gardner, F.L.S. 8vo. London, 1910.

From Harold Sands, Esq., F.S.A., M.I. Mech. Eng. :—*Sketch of the history of Caister Castle, near Yarmouth.* Edited by Dawson Turner. 8vo. London, 1842.

From the Author :

1. *Ashburnham House and the precincts of Westminster Abbey.* By Harry Sirr. 4to. London, 1910.

2. *J. Morgan and his Phoenix Britannicus, with notes about his other works.* By Harry Sirr. 8vo. Margate, 1906.

From the Author :—*The lordship, castle, and town of Chepstow, otherwise Striguil. With an appendix on the lordship of Caerleon.* By James G. Wood, F.S.A. 8vo. Newport, Mon., 1910.

From Somers Clarke, Esq., F.S.A. :—*Courts of Justice Commission. Instructions for the competing architects.* fol. London, 1896.

From the Author :—*The Hal-Sallieni prehistoric Hypogeum at Casal Paula, Malta.* First report by T. Zammit, M.D. 8vo. Malta, 1910.

From the Worshipful Company of Pavors :—*History of the Worshipful Company of Pavors of the City of London. With brief notices of London streets, their roadways and pavements.* By Charles Welch, F.S.A. Privately printed. 8vo. London, 1909.

From the Author :—*An account of Belsay Castle in the county of Northumberland.* By Sir Arthur Middleton, Bart. Privately printed. 4to. Newcastle-upon-Tyne, 1910.

From the Author :—*The Twemlows, their wives, and their homes.* By F. R. Twemlow, D.S.O., F.S.A. 4to. Wolverhampton, 1910.

From the Trustees of Sir John Soane's Museum :—*General description of Sir John Soane's Museum.* Ninth edition. 8vo. Oxford, 1910.

From the Author :—*Recent archaeological investigations in Ontario.* By Henry Montgomery. 8vo. n.p. 1910.

From Edward Bell, Esq., F.S.A. :—*The itinerary of John Leland, Parts IX, X, and XI.* Edited by L. Toulmin Smith. 8vo. London, 1910.

From the Commissioner-General of the Japanese Government to the Japan-British Exhibition :

1. An illustrated catalogue of Japanese old fine arts at the Japan-British Exhibition. 8vo. Tokyo, 1910.
2. An illustrated catalogue of Japanese modern fine arts at the Japan-British Exhibition. 8vo. Tokyo, 1910.

From Messrs. G. Allen & Sons :—*Dinanderie, a history and description of mediaeval art work in copper, brass, and bronze.* By J. Tavenor-Perry. 4to. London, 1910.

From the Author :—*A Quantock family : the Stawells of Cothelstone and their descendants.* By Col. George D. Stawell. 4to. Taunton, 1910.

From the Author, Arthur Mayfield, Esq. :

1. A short description of St. Mary's Church, Mendlesham, Suffolk. 8vo. n.p. 1910.
2. An account of the arms and armour in Mendlesham Church, Suffolk. 8vo. n.p. 1910.
3. Neolithic remains at Stuston, Suffolk. 8vo. n.p. n.d. (1909).

From the Author :—*The military effigies at Maltby and Belleau in Lincolnshire.* By Professor F. P. Barnard. 8vo.

From Frank Cundall, Esq., F.S.A. :—*Jamaica Negro proverbs and sayings, collected by J. Anderson and F. Cundall.* 8vo. Kingston, Jamaica. 1910.

From the Author :—*Bacon is Shakespeare.* By Sir Edwin Durning-Lawrence, Bart. 8vo. London, 1910.

From the Author, R. Stewart-Brown, Esq., M.A. :

1. *The wapentake of Wirral.* 8vo. Liverpool, 1907.
2. *The Tower of Liverpool, with some notes on the Clayton family.* 8vo. Liverpool, 1910.
3. *Selections from the Moore Papers.* 8vo. Edinburgh and London, 1909.
4. *The disafforestation of Wirral.* 8vo. Edinburgh and London, 1907.
5. *An account of the oil painting 'Liverpool in 1680', with notes on the Peters family of Platbridge and Liverpool.* 8vo. Edinburgh and London, 1909.
6. *The pedigree of the Claytons of Crooke, Fulwood, and Adlington.* 8vo. n.p. 1910.

From Sir Ralph F. Payne-Gallwey, Bart. :—*Pedigree of Frankland of Thirkleby, Yorkshire.* Single-sheet folio. n.d.

From the Author, E. A. Martin, Esq., F.G.S. :

1. *Further experiments on Dew-Ponds.* 8vo. London, 1910.
2. *Results of Dew-Pond investigation.* 8vo. London, 1910.

From the Author :—*Domesday tables for the counties of Surrey, Berkshire, Middlesex, Hertford, Buckingham, and Bedford, and for the New Forest.* By the Hon. F. H. Baring. 8vo. London, 1909.

From R. Phené Spiers, Esq., F.S.A. :

- The following works by R. P. Camille de la Croix, S.J., Hon. F.S.A.
1. *Hypogée-Martyrium de Poitiers (Text and plates).* fol. Paris, 1883.

2. Les temples et le puits de Mercure découverts sur les hauteurs de Poitiers en 1880. 8vo. Poitiers, 1888.
3. Étude sommaire du Baptistère Saint-Jean de Poitiers. 2^e édition. 8vo. Poitiers, 1904.
4. Étude sur l'ancienne église de Saint-Philibert-de-Grand-Lieu. (Text) 8vo. Poitiers, 1906.
(Plates) fol. Poitiers, 1906.
5. Les origines des anciens monuments religieux de Poitiers et celles du square de son Palais de Justice et de son donjon. 8vo. Poitiers, 1906.

From the Author :—Aspects of death and their effects on the living, as illustrated by minor works of art, especially medals, engraved gems, jewels, &c. By F. P. Weber, F.S.A. 8vo. London, 1910.

From the Author :—L'église de Saint-Philibert-de-Grandlieu (Loire-Inférieure). Par M. le Comte R. de Lasteyrie. 4to. Paris, 1909.

From the Editor :—Annals of the reigns of Malcolm and William, Kings of Scotland, 1153-1214. By Sir Archibald Campbell Lawrie, LL.D., F.S.A. 8vo. Glasgow, 1910.

From the Byzantine Research and Publication Fund :—Churches in Lower Nubia. By G. S. Mileham. Edited by D. Randall MacIver. 4to. Philadelphia, 1910.

From the Author :—The family of John Dwight, B.C.L., Potter. By Sir Arthur H. Church. 8vo. n.p. 1910.

From the Author :—On the use of the deer-horn pick in the mining operations of the ancients. By H. W. Sanders, F.S.A. 4to. Oxford, 1910.

From J. Pierpont Morgan, Esq. :—Catalogue of manuscripts and early printed books from the libraries of William Morris, Richard Bennett, Bertram, fourth Earl of Ashburnham, and other sources. Now forming portion of the library of J. Pierpont Morgan. Privately printed. 4 vols. 4to. London, 1906-1907.

Special votes of thanks were passed to Mr. Pierpont Morgan and to Mr. Vernon Watney for their gifts to the Library.

The following letter was read :

"Marlborough House,
Pall Mall, S.W.,
18th July, 1910.

DEAR SIR,

I am commanded by the King to inform you that His Majesty is graciously pleased to become Patron of the Society of Antiquaries of London.

Yours faithfully,

W. H. P. CARINGTON.

The Secretary."

The following draft of a statute proposed to be made in addition to the existing statutes was read :

CHAPTER I, SECTION XIII.

"The entry of the election of a candidate in the Society's Book of Candidates, signed by the President or his deputy, whether made before or after the passing of this statute, shall be conclusive evidence that the candidate has been duly elected a Fellow.

(Signed) W. GOWLAND, *V.P.*

PHILIP NORMAN, *Treasurer.*

EDWARD BRABROOK, *Director.*

C. R. PEERS, *Secretary.*

G. B. CROFT LYONS.

C. T. MARTIN."

24 Nov. 1910.

Notice was given that a special meeting of the Society would be held on Thursday, 12th January, 1911, at a quarter past eight o'clock, to discuss and to determine by ballot whether the foregoing draft should be passed or not.

SIR EDWARD BRABROOK, C.B., Director, read the following communication :

"In the year 1787, the Council of the Society, taking note of the possession by the Society of a MS. transcript of the Black Book of the Household of Edward IV, appointed a committee to prepare it for publication and desired them to add to it the Statutes and Regulations of the Royal Households in other reigns. The result was the publication in 1790 of a separate 4to volume of xxii + 476 + 28 pages entitled 'A collection of Ordinances and Regulations for the government of the Royal Household made in divers reigns from King Edward III. to King William and Queen Mary, also receipts in ancient cookery'.

Even after 120 years it seems desirable that anything erroneous or misleading in a volume published by the Society should be corrected ; and the Society is therefore much indebted to its Fellow, Col. J. G. Sandeman, M.V.O., for a communication addressed to Lord Dillon with reference to that work. It would appear that the editors did not wholly rely upon the Society's MS. transcript, but referred to the original MS., Harleian 642, and extracted from it, among other things, a set of Ordinances for the household made at Eltham in 17th Henry VIII (1526). That heading covers pages 135 to 207 in the printed volume ; but Col. Sandeman states that it is not applicable to pages 162 to 173, which contain a 'Bouche of Court' derived from another MS. belonging to a later date.

This MS. 'is catalogued in "Letters and Papers Foreign and

Domestic, Henry VIII.", vol. xx, part 2, appx. p. 548, as "Lansdowne MS. 2, fol. 84." The catalogue characterizes the copy printed by the Society of Antiquaries as very faulty and confused, and assigns the date of the MS. to the latter part of 1544 or the first half of 1545, 'not later than July, as it contains Sir George Carew's name.' To this Col. Sandeman adds that it contains the names of Lord Wriothesley as Lord Chancellor, who was raised to the peerage and appointed Chancellor in 1544; of George Day, as Bishop of Chichester, who was consecrated to that see in 1543; of Sir Ralph Fane, as Lieutenant of the Gentlemen Pensioners, who was knighted in 1544 and appointed Lieutenant in 1545; of Sir Anthony Browne, as Captain of the Pensioners and Master of the Horse, who was appointed to the latter office in 1540, and many others which are inconsistent with the date of 1526 (17 Henry VIII) in the heading of the pages in our volume.

That this correction is not unimportant appears from the fact that Pegge in his 'Curialia', and others following him, have taken this document to prove that the Pensioners existed in 1526 and were a revival of the 'Spears' of 1509; whereas Col. Sandeman considers that there is conclusive evidence that the Spears ceased to exist, or at any rate to receive pay, after December, 1515. The order for the establishment of the Pensioners dated 1539 gives as a reason for their institution that Henry VII had a household corps of yeomen, and contains no reference to the Spears of 1509.

Col. Sandeman's observations appear to be equally applicable to the 'declaration as to diet' on pages 174 to 197, which contain references to Gentlemen Pensioners (pp. 188, 192, 197). The 'appointment of Harbigage' which follows on p. 198 is stated to have been made at Eltham on January 9, 1526 (17 Hen. VIII), and does not mention them. Pages 208 to 240 contain additions to the Eltham ordinances made at various times between 1532 and 1545 and call for no observation beyond the record of an increase of wages."

R. H. FORSTER, Esq., M.A., F.S.A., and J. G. N. CLIFT, Esq., read a paper on the Forum of Corstopitum.¹

The Forum occupies a large area in the centre of Corstopitum, the south side fronting on a wide street which runs approximately east and west, and appears to be the principal street of the town. The two granaries and the fountain are also on the north side of this street, the south-east corner of the

¹ In the above title the word 'Forum' is used as a term of convenience only, as the question of the purpose of the building is not dealt with.

fountain being about 16 ft. from the south-west corner of the Forum.

In plan it is approximately square, the average measurements being 222 ft. from north to south and 216 ft. from east to west. Its main features are a large central court, about 165 ft. by 160 ft., and ranges of buildings on each of the four sides. The entrance to this court has been in the centre of the south range.

The western range has been divided into nine small rooms, measuring internally 17 ft. from north to south by 26 ft. 6 in. The dividing walls terminate in T-shaped ends, leaving openings to the central court 13 ft. in width.

The south range, including the corner chambers, is divided into ten rooms of about the same size, which seem to have opened on the street and not on the central court.

The east range appears to have consisted of a single long room, 26 ft. 6 in. in width, running the full length of the central court: there is a doorway near the south-west corner, and probably the design included another door in the north east.

Of the north range so little remains that the design is hard to trace. Probably it was meant to be divided into small courts, as some indications of cross-wall foundations have been found.

Remains of two buildings have been found in the central court, but they do not appear to be in any way connected with the design of the main building.

Of the south range little remains—in many places only the clay-and-cobble foundations. The south-east angle, however, is still one course high; the east half of the inner wall stands one, two, and (in the case of a single stone) three courses. The roadway of the entrance has been traced, and under it is a fine stone drain, measuring internally 2 ft. by 1 ft. 9 in., with covers a foot thick.

On the west side there is a considerable stretch of masonry standing two and three courses above the foundations, and parts of four of the cross walls are standing one or more courses high.

At the north-east and north-west angles only the stone foundation course remains, and a short distance from each corner only the clay and cobbles are left. In the centre of the north side even these disappear. The existing masonry is in all cases of a similar character.

The following dimensions from the west side may be taken as typical:

1. Foundation course, resting on a bed of clay and cobbles, and consisting of two rows of stones with their inner faces undressed, the course being 4 ft. 3 in. wide and 14 in. thick.

2. Plinth course, $15\frac{1}{2}$ in. thick, 2 ft. 11 in. wide on the lower, and 2 ft. 6 in. wide on the upper bed, with a moulded plinth on the external face. The inner faces of the stones have drafted margins with the centres left rough.

3. The second and third courses are 12 in. and 15 in. in height respectively, 2 ft. 6 in. wide, and have drafted margins with the centres left rough.

A little to the north of the centre of the east range both the outer and the inner walls have been overturned. A trench has been dug between the two to a depth of about 4 ft., the clay-and-cobble foundations have been partially cut away, and the stones thrown into the trench, some being completely overturned. There are distinct marks of the use of crowbars. In this portion no stone of a course higher than the plinth course has been found. This fact suggests that the building, as originally designed, was abandoned in an unfinished condition, and this is supported by other evidence:

1. Foundation course. Between the destroyed portion and the north-east angle this is the only course remaining, and the upper beds of the stones are undressed: no plinth course could ever have been bedded on them.

2. Plinth course. On both the east and west sides the plinth is unfinished. Apparently the stones have been roughly dressed with the pick at the banker, and drafts chiselled at each end: they were then bedded, and a further dressing given to the plinth, on the west side with the chisel, and on the east with the point of the pick. Finally the plinth was chisel-dressed down to the drafts. The existing portions of the plinth clearly show all these stages.

3. First course of inner east wall. The four northernmost stones remaining of this course are clearly properly bedded, but their upper beds are not dressed to receive the next course.

4. Second course. In the cross wall dividing courts 2 and 3 of the west range one of the stones of this course has had its top bed finally dressed over about half its area, the other half remaining about a quarter of an inch higher.

5. Third course. The three northernmost stones of this course of the outer west wall have not had their upper beds dressed to receive the next course.

6. The drain under the entrance has never been continued at either end. This is proved by the bulge of the clay on which the flooring stones rest, and by one of the side stones at the north end, which projects beyond the other; the masons have begun to cut off the projection but have not finished the work.

7. Banker chippings occur in considerable quantities, but irregularly. In the south-west corner court they formed a heap

rising about 15 in. above the level of the footings. Another heap outside the main east wall partly covers the plinth.

8. The openings of the west courts show no signs of hinge holes or of grooves for wooden barriers. The remains of the doorway of the south-east court and the door of the long east chamber show no trace of hinge holes, and the jambs are still bossed.

9. A considerable number of stone-dressing tools were found close to various parts of the walls.

10. The remains of a rough building of late date were found covering the southern part of the east range. Its foundations appeared to have been laid by digging a trench and filling it with loose stones. Where the late wall is over the remains of the original wall, this loose stone foundation has been carried down to the top of the existing remains of the latter.

It is not disputed that the site was occupied after the suggested abandonment or that the occupation continued up to the end of the Roman period. Most of the south courts show traces of two later floors, one dating from Severus or later, and the other from about 360. Some sort of building seems to have been erected on this part of the site, but only two small fragments remain, each set on the original foundation course but obviously not forming part of the original structure.

It is suggested that the stones were set with the upper beds only roughly scabbled and that the final dressing of those beds was done with the stones in position: also that the margins were drafted at the banker, to ensure proper jointing, and the rough centres or bosses were to be dressed off at a later stage, so as to produce a flush surface. In some cases this has actually been done. The size of the projections varies, and seems to have been determined by the size of the stones as they came from the quarry.

If these conclusions are correct, the dates of the commencement and abandonment of the building must be very near together. The coins point to some part of the Antonine period, not earlier than Pius. The levels are not very certain: the upper surface of the foundation course is a few inches above the floor of the fountain tank, and 2 ft. 3 in. above the original road level in front of the east granary, which dates from 140. As the south range of the Forum stands on made ground, the difference perhaps points to a date decidedly later than 140, and as the evidence suggests a hurried abandonment, we must look for a time of disaster in the latter part of the second century. The disaster which occurred early in the reign of Commodus may possibly mark the date: the details of the masonry are consistent with such a period, and as the loss of the province

between the two walls must have diminished the importance of Corstopitum, we can understand why no attempt was made to resume the work on the original lines. If this seem too late a date, we may perhaps fix on the trouble at the beginning of the reign of Marcus Aurelius, but in that case it is more difficult to explain why the work was not resumed.

Professor HAVERFIELD regretted that the excavators had not taken their colleagues into their confidence with regard to the 'Forum', but congratulated Mr. Forster on his successful treatment of the building. The question should be worked out on the spot by those familiar with the site, but he himself could not say whether the building had ever been finished. It was difficult to explain the alleged intention of the builders to leave the bases undressed; it could hardly have been to facilitate handling the blocks, as some centres were too shallow to give a purchase. It was a common practice in Italy to draft the edges of building-stones and to employ the best workmen for the purpose, but the rest of the stone was often less carefully dressed. Another point, not dealt with in the paper, was the discovery of other floors inside the walls of this building, and large spaces were occupied after the date assigned for the destruction of the massive walls. If the latter were destroyed, others were built up but could not be traced on the upper levels. Further, if the main walls were purposely overthrown, they must once have reached a fair height, though not necessarily as high as the roof. Perhaps what remained had served as a foundation for slighter work in the upper courses.

Mr. PEERS had only made a cursory examination of the structure and confessed to being puzzled on the site. There was some evidence that the mouldings of the plinth were in part worked down and still more that the building was unfinished. The explanation suggested was more ingenious than convincing. There was as much skilled as unskilled work on each stone, and it was curious that there was enough skilled labour to dress three sides but not the fourth side of the stones. It was obviously easier to dress stones on the banker, and there seemed no reason for finishing the fourth face after the stone was laid. Rock-faced masonry was extremely common in Roman times and gave light and shade to a structure. Though unfinished in part, the building must at one time have been raised to a considerable height, to be subsequently thrown down.

Mr. FORSTER replied that the southern part of the east range had not been quarried by Wilfrid or any one else, as the later building covered it, the eastern walls of the two structures coinciding. The top of the original stonework was the level of

the trench for a later building. He could not agree that the wall must have been higher: there was no trace above the plinth course at the point where the wall was undercut and thrown down. There were two buildings on the south side that belonged to the original design, and in each case the later building was on the original foundation course. Elsewhere the original foundation course had never been built on, or else the original buildings had been previously removed. The best masons were probably requisitioned from York, and the remainder were instructed by them to do the coarser work.

The PRESIDENT had been willing to accept Mr. Forster's explanation till he heard Professor Haverfield's strictures, and now regarded the theory as not proven. The paper had lost nothing by discussion, but being full of detail would have been easier to follow if a plan or synopsis had been circulated.

Thanks were ordered to be returned for this communication.

THURSDAY, 1st DECEMBER, 1910.

CHARLES HERCULES READ, Esq., LL.D., President,
in the Chair.

The following gifts were announced, and thanks for the same ordered to be returned to the donors:

From the Compiler:—*Pedigree of Layard*, with notes. Compiled by Henry Wagner, F.S.A. 8vo. London, 1910.

From the Author:—*The oldest human industry*. By Rev. H. G. O. Kendall. 8vo. London. n.d.

From the Author:—*Oxford in the time of William III and Anne, 1621–1712*. Some notes on a collection of letters in the possession of Albert Hartshorne. [By Albert Hartshorne, F.S.A.] 8vo. Oxford, 1910.

From the Earl of Crawford, K.T., F.S.A.:

Bibliotheca Lindesiana.

Catalogue of the printed books preserved at Haigh Hall, Wigan. 4 vols. 4to. Aberdeen, 1910.

Bibliography of royal proclamations of the Tudor and Stuart sovereigns.

Vol. I. England and Wales.

Vol. II. Part I. Ireland.

Part II. Scotland.

2 vols. 4to. Oxford, 1910.

From J. Pierpont Morgan, Esq. :

1. Catalogue of the collection of miniatures, the property of J. Pierpont Morgan. Compiled by G. C. Williamson. Privately printed. 4 vols. 4to. London, 1906-1908.
2. Catalogue of the collection of jewels and precious works of art, the property of J. Pierpont Morgan. Compiled by G. C. Williamson. Privately printed. 4to. London, 1910.

Special votes of thanks were returned to the Earl of Crawford and Mr. Pierpont Morgan for their gifts to the Library.

Notice was again given of the special meeting of the Society to be held on Thursday, 12th January, 1911, at 8.15 p.m., to consider a draft statute proposed to be made in addition to the existing statutes, and the draft statute was again read.

The following was read :

"Amendments to the draft of a proposed addition to the statutes read November 24, 1910.

1. *To add* after the word 'Deputy' the words: 'presiding at the ballot when such candidate was actually elected.'

2. *To omit* the words: 'whether before or after the passing of this statute.'

3. *To add* after the word 'shall' the words: 'after the lapse of twelve calendar months from the date of such election.'

4. *To add* after the word 'evidence' the words: 'so far as the Society is concerned.'

The draft, as proposed to be amended, will then read as follows :

"The entry of the election of a candidate in the Society's Book of Candidates, signed by the President or his deputy presiding at the ballot when such candidate was actually elected, shall, after the lapse of twelve calendar months from the date of such election, be conclusive evidence, so far as the Society is concerned, that the candidate has been duly elected as a Fellow."

(Signed) W. PALEY BAILDON.

Lincoln's Inn, Nov. 25, 1910."

Notice was given of a ballot for the election of Fellows to be held on Thursday, 12th January, 1911, and a list of the candidates to be balloted for was read.

W. D. CARÖE, Esq., M.A., F.S.A., contributed a paper on two seventeenth-century oil paintings of the choir of Canterbury Cathedral.

Both pictures were exhibited. The first is inscribed: "Thos.

Johnson, fecit. Canterbury Quire as in 1657. Y^e prospecte from y^e Clock House." "Y^e Clock House" is Prior Chillenden's pulpitum, which contained a clock, as can be seen from Cole's drawing in Dart.

The second has no inscription or signature. The point of view is much the same as no. 1, but a little more elevated.

Little is known about Johnson; he drew for Dugdale and is also the author of the plan of Canterbury generally called Hollar's. The present picture was exhibited at the Royal Society in 1685, at a time when Pepys was President and Wren a member of Council, having passed the chair.

A remarkable feature of the picture is the extraordinary accuracy of detail, and it is thus extremely valuable as illustrating points in the building which have since been lost. Thus, for example, the hooks from which the hangings depended on Eastry's screen are shown. These were cut out by Austin and the holes filled in with the pieces of stone now to be seen. Again, wall paintings, now lost, are shown on the outer walls of the aisles. The monks' stalls erected by Prior Eastry, which remained until 1704, are also shown. In that year they were replaced by others made by John Smallwell of London, which in their turn were removed by Sir Gilbert Scott in 1879.

The iron screens enclosing the south aisle and separating the choir from the Trinity Chapel are clearly seen. These screens were in 1748 removed to the south-west porch and west door, where they now are.

A more difficult subject is the altar and altar screen. This latter, it has been suggested, was a low wall running across the presbytery and decorated with tabernacle work and imagery. On both sides would be doors leading to the space behind, and the wearing of the steps by the traffic passing through these doors is clearly shown in Johnson's picture. In 1642 this screen was destroyed, and in 1664 Peter Hartover was employed to erect a new screen of wood. There is some little difficulty about this, for, when the agreement was made with Hartover, something was standing by way of a screen, but whether this was part of Chillenden's altar-piece or an earlier work of Hartover's is not quite certain. The balance of opinion, however, is in favour of its being the latter, for it was certainly of wood, and there can be little doubt that Chillenden's was of stone, although some authorities disagree on this point. The last alteration made in this part of the building was in 1835, when the altar was moved from its proper position to the top of the ascent: the archbishop's chair had been removed from its correct place behind the altar some little time before.

The second picture, which has been ascribed wrongly to Pieter

Neefs, although a better painting, is far from accurate, and must have been executed away from the church. It shows the organ, built by Pearce, and the organ loft, but the details are by no means correct. In this connexion it is interesting to note that the portable Elizabethan organ has recently been recovered and placed in the library.

Mr. HOPE congratulated Mr. Caröe on the possession of a picture of special interest as an archaeological document: it showed a state of things not otherwise recorded. The tapestries of Dering had been found abroad, at Aix in Provence, by Dr. Montagu James, and afforded an interesting confirmation of the painter's accuracy. In the wall under the windows one of two tombs was visible, but the canopy had already been destroyed when the picture was painted. Superior and inferior stalls merely meant that they were arranged in two rows, the higher at the back. At Adisham there was a most remarkable piece of furniture of the thirteenth century, the use of which was uncertain, but possibly it was the back of the relic-cupboard which stood on the north side of the choir at Canterbury. One picture showed the stone altar entirely destroyed, but its place was clearly marked, and it was a question whether the screen had been utterly destroyed: both were known to have been defaced. St. Thomas's Chapel was seen to be shut off by a screen that was important ecclesiastically as completing the enclosure of the choir. He would like to see it replaced and the old arrangement at the east end restored. The removal of the altar had been a mistake, and the archbishop's seat should be in the place of dignity behind the high altar.

The DEAN OF CANTERBURY said that personally he would be grateful for any support the Society could give towards carrying out Mr. Hope's suggestion, and had always felt it an outrage that he could not celebrate in the proper place, at St. Anselm's altar. The removal of the throne was not a serious disadvantage, Trinity Chapel being used for the enthronement. If the restoration was to be carried out he would require strong moral support, as many concerned had very short archaeological memories. Funds, too, would be required, and at present he was in difficulties as to raising the last £12,000 for repairing the south-west tower and pinnacles.

Canon MASON remained sceptical as to the existence at any time of a stone screen behind the altar. Perhaps the indications in the picture were the marks of footways going through the iron screen. But he was open to conviction. The Dean had his entire sympathy with regard to the restoration of the east

end, which had always appeared desirable to himself. There would be one practical inconvenience in the scheme: if a stone screen ran behind the altar at the foot of the steps, while the archbishop's throne stood at the top, then the archbishop on his throne would not be visible from the choir. He would be glad to see the altar brought back to its original position, and the chair set somewhere near its ancient place. The Society would be comforted to hear that Dean Bargrave's organ had been taken from its unworthy surroundings above St. Andrew's Chapel and placed in the cathedral library.

SIR CHARLES HOLROYD said Johnson's picture was by a hand entirely unknown to him: though extraordinarily interesting from an archaeological point of view, it was the work of a man who had not been taught to paint, but showed care and industry. He had a curious impasto, and had omitted the lighting. The second picture was by a trained artist who had no interest in his subject, and was certainly not Pieter Neefs. The other view, of the exterior, might possibly be by Johnson when he had learnt a little more about painting: the figures in the foreground were by a different hand.

MR. CARÖE thought the artistic criticisms just, but himself looked on the pictures not as works of art, but as illustrations of architecture. There was definite evidence of a 'tabernacle screen highly decorated'; and if there were no wall with gates in it the steps would not be abraded.

THE PRESIDENT said the pictures could not fail to interest the Society even if the monuments were of less importance. There were many pictures of this kind, but the name of the building was seldom added: complicated architecture of that sort must have been copied from some existing buildings, and these might still be recognized some day in Holland. He commended this line of study to the Society; and thought it would be advantageous to all concerned if the small organ mentioned in the paper were exhibited in this room.

Thanks were ordered to be returned to Mr. Caröe for his paper, which will be printed in *Archæologia*.

THURSDAY, 8th DECEMBER, 1910.

CHARLES HERCULES READ, Esq., LL.D., President,
in the Chair.

The following gifts were announced, and thanks for the same ordered to be returned to the donors :

From the Author :—Baildon and the Baildons. By W. Paley Baildon, F.S.A. Part II. 4to. London, 1910.

From the Rt. Hon. Lord Avebury, P.C., F.S.A. :—Memoirs of the Peabody Museum of American Archaeology. Vol. IV. No. 3.—Explorations in the department of Peten Guatemala and adjacent region. Reports by Teobert Maler. 4to. Cambridge, U.S.A. 1910.

From the Author :—Catalogue of the Dante Collection in the Library of University College, London. By R. W. Chambers. 4to. London, 1910.

Fleet-Surgeon Albert Ernest Weightman, R.N., was admitted a Fellow.

Notice was again given of a ballot for the election of Fellows on 12th January, and the names of the candidates were read.

G. J. TURNER, Esq., F.S.A., read a paper on the Watling Street at Westminster, the object of which was to show that Watling Street crossed the Thames at Lambeth Horseferry and not at Stangate by Westminster Bridge.

Mr. REGINALD SMITH was ready to admit that there might have been a Roman branch-road to London leading from the Watling Street to the bridge and coinciding with the Old Kent Road, but he knew of no real evidence for such a road. The Ermine Street from Dorking to the bridge would provide this connexion, and seemed to cross the Watling Street near Deveril Street. Whatever the mediaeval *pons* was, there was reason to suppose that a British bridge existed at Westminster before the Roman conquest, and was that mentioned by Dio Cassius. It was to this bridge that the Roman road from Kent would be directed; after crossing the river it traversed Westminster, and at a point on the west (apparently Hyde Park Corner) turned into the line of the Edgware Road. The ambiguity of Higden's *ad occidentem Westmonasterii* was reproduced in the translation 'crossing the river to the west of Westminster', which might mean *on* the west, or imply motion *to* the west. As the Thames for some distance above and below Westminster ran north and south, the first alternative was absurd, and he preferred the other. Higden on this theory meant that the

Watling Street crossed the Thames and passed through the middle of Westminster on its way westward. There would be a gravel substratum for it as far as Buckingham Palace, as Dean Buckland discovered years ago. Parish boundaries seemed a poor clue to Roman roads: if the roads had been kept up, the boundaries naturally coincided in places; but they would not lead to the recovery of a Roman road that had been lost before the parishes were formed.

Mr. PAGE thought that the course of the Watling Street south and west of London could be settled once for all by judicious excavations in the parks, which had never been built over.

Mr. J. G. WOOD pointed out that about half a mile of the Roman road had been actually found at the south end of the Edgware Road, coinciding with the present road.

The TREASURER remarked that he had noticed the remains of what had every appearance of a Roman road close to the site of the Old Town Hall in Southwark.

Mr. REGINALD SMITH exhibited, with the permission of the Norwich Museum Committee, a bronze-gilt sword-pommel of the Viking period, found probably in East Anglia, upon which he communicated the following note:

“When visiting the museum at Norwich Castle in the summer, I noticed among miscellaneous antiquities in the Fitch collection the imperfect but interesting pommel (fig. 1) now exhibited, which seems to be the only example of its type found in this country. As the collection was a local one, it is permissible to suppose that this was found in Norfolk or else in Suffolk, but there is no further clue, nor any record of associated objects. It consists of a heavy but partly hollow casting of bronze, originally with five lobes, one end having been lost. The divisions between them are deep when compared with ordinary pommels, and over each junction passes a stout silver cord of two strands. In sunk panels on both faces of the lobes are imitation filigree designs all in the same style and really part of the casting, both panel and design being gilt in every case. Particular interest attaches to the decoration as it sharply contrasts with the Anglo-Saxon and Irish, and shows dependence on Carolingian models.

The closest parallel in England is the remarkable sword-handle of silver-gilt found in Fetter Lane, London, and now in the national collection. It has been recently published in colours,¹ is somewhat earlier, and shows strong Irish influence,

¹ *V. C. H. London*, i. 158, figs. 8 and 9 on plate. For the hour-glass handle, compare B. Salin, *Die altgermanische Thierornamentik*, 99.

being indeed an excellent example of ninth-century art, before the true Viking period in England. It is difficult to find a suitable term to express the peculiar blend of styles in this case, for there is much that might have come direct from a Merovingian illuminated manuscript, and on the other hand fanciful curves and animals that caught the taste of artists under Charles the Great and characterize the early Carolingian period (from about A.D. 800 to 850). Both faces of the central lobe of



Fig. 1. BRONZE-GILT SWORD-POMMEL. (NORWICH MUSEUM) (1).

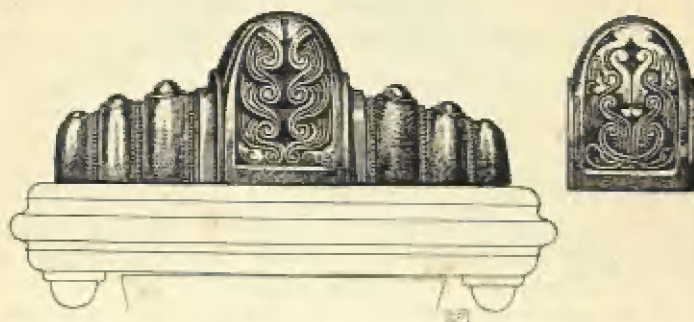


Fig. 2. SILVER-GILT SWORD-POMMEL. FETTER LANE, LONDON (BRITISH MUSEUM) (1).

the pommel are here reproduced (fig. 2), and bear a design¹ that seems to be derived from the classical palmette (acanthus) by a craftsman who was unfamiliar with that motive and distorted it to suit his own purpose. At the top of one panel should be noticed a remnant of the animal pattern that had dominated Anglo-Saxon art from the sixth century.

The point of the comparison is, however, the shape rather than the decoration of the two pommels. The London example is divided into seven sections by beaded wire, three diminishing in

¹ Compare the early hair on bronze masks figured in *Christiania Vidensk. Selsk. Forhandlinger*, 1890, no. 3, pl. iii, figs. 3, 4.

size on either side of the large central lobe; while below is a straight member connecting with the grip, and showing the original character of the specimen before us. The dimensions are in close agreement, the London pommel being about $\frac{1}{4}$ in. less both in length and height; and the difference in solidity can be explained by the obvious fact that the costlier specimen was intended for ornament rather than use, and a counterpoise was therefore not essential. Here, as in other classes of antiquities, development or degradation can be traced even in the small and fortuitous series at the disposal of the archaeologist, and it is interesting to find form and decoration varying together. It is possible to appreciate the changes of fashion even in sword-pommels, which from their very nature have a limited range of variation. Swords of the seventh century are happily preserved to us, not entire, but a blade here and a handle there; and reconstruction is possible. At that date the 'cocked-hat' pommel¹ was in vogue, and cell-work of garnets and other stones made it a striking piece of jewellery. In the tenth and eleventh centuries there were two main types of sword, both probably borne by the Vikings but perhaps of different parentage; and there was a certain variety also in the pommels, though all can be readily distinguished from the fashions of still later centuries. We have therefore two limiting dates to guide us in determining the age of the specimen exhibited, even without reference to the decoration upon it, and everything points to the late ninth century.

A change in artistic style has been dated from other considerations about the middle of the ninth century. It was then that the later Carolingian school became dominant in north-west Europe, and in the ensuing century it reached its climax in conjunction with Irish art, which eventually exercised a remarkable influence on stone and metal-work even in Scandinavia.

A silver bowl ornamented in the Carolingian style with formal foliage was brought before the Society in 1909, and may serve as a richer example of the classical Renaissance. Its date is said to be more probably the ninth than the tenth century,² but a still closer parallel to the design of the Norwich pommel is a trefoil brooch (fig. 3) found at Kirkoswald, Cumberland,³ in association with coins dating between 796 and 854, and now preserved in the British Museum. It is of silver, with garnets (originally) set in bosses at the angles and centre, the field being covered with curling stems bound together at intervals with collars. The whole design is executed in heavy filigree, the applied parts

¹ F. C. H. Kent, i. 356, 368.

² *Archæologia*, lxi. 359, pl. xlvii.

³ F. C. H. Cumberland, i. 282.

resembling the cloisons of enamelled cell-work, with twisted silver wire adhering to the upper edges.

It has been observed by Dr. Sophus Müller¹ and the late Ingvald Undset² that the peculiar ornamentation of the trefoil brooch was due to its derivation from the three-lobed fastening seen attached to sword-belts in illuminated Frankish MSS. Each lobe had a rivet to fasten the end of a strap, much as a martin-

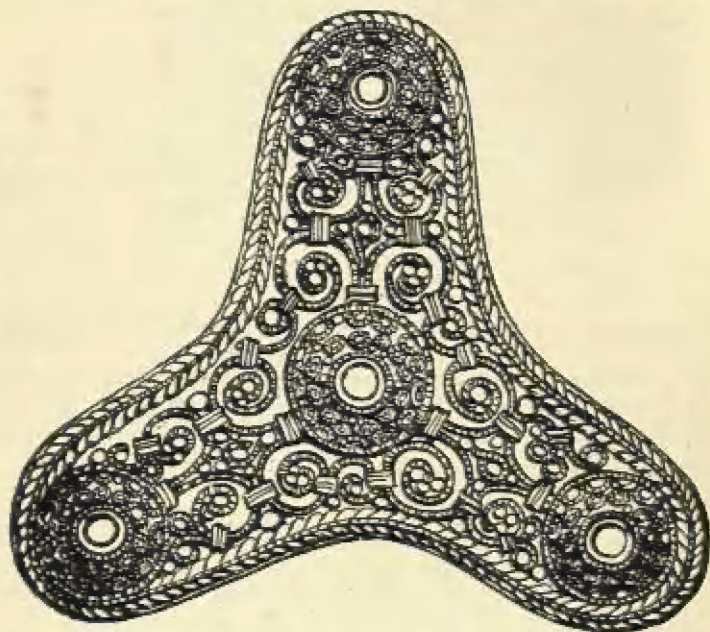


Fig. 3. SILVER TREFOIL BROOCH, KIRKOSWALD, CUMBERLAND (BRITISH MUSEUM) (3).

gale unites the straps on a horse's chest. The Carolingian form and foliage-pattern were both adopted by northern craftsmen, who turned the trefoil into a brooch, and transformed the classical foliage almost beyond recognition.³

A somewhat later example of the same Carolingian style, dated on historical grounds, is the seal of Ælfrie (presumably the

¹ *Die Thierornamentik im Norden*, 144.

² *Christiania Vidensk. Selsk. Forh.*, 1891, pl. i, figs. 3 and 4; pl. iii, fig. 14.

³ Carolingian influence can be traced in such specimens as Montelius's *Kulturgegeschichte Schwedens*, figs. 474, 476, 485, 497.

Alderman of Hampshire slain at Ashington in 1016), which bears on the back a graceful cruciform pattern¹ that also occurs on a pendant found at Saffron Walden,² this being perhaps the latest of the group. The floriated cross with hollow centre, sometimes enclosing a trefoil or quatrefoil, is seen on the Anglo-Saxon coinage; and also, as our Fellow Mr. Dalton informs me, on a silver bowl from the Government of Vyatka, Russia,³ that bears some resemblance to that already referred to from an unknown locality. It is somewhat disconcerting to find the same style at opposite ends of Europe; but as Carolingian art is well represented in the West, and was continued in our own Win-

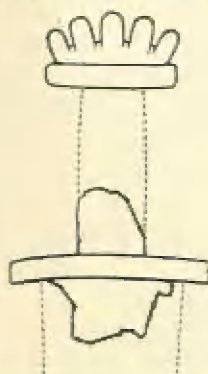


Fig. 4. OUTLINE OF
SWORD-HANDLE, BALE-
STRAND, NORWAY (1).

chester school of illumination,⁴ we can hardly assign an oriental source to all extant examples. Though the Vikings are known to have traded with countries beyond the Black Sea, and were probably responsible for the Cuerdale treasure (containing oriental silver and deposited about 910),⁵ they can hardly be credited with the introduction of a new art into the empire of Charles the Great; and the more reasonable explanation is that the ornamentation of both Russian and Western examples was an artistic tradition that linked the later classical art with the Carolingian renaissance, and inspired both eastern and western Europe from some central area, that may have been Syria.

The Viking period began in Scandinavia about 700 according to some authorities, others preferring a century later, but in our own islands their settlements were only beginning about the middle of the ninth century, after seventy years of plundering incursions. Consequently the Norwich pommel can only be called Viking in respect of date. The design is quite distinct from the Scandinavian, though the same form of pommel has occasionally been found in Norway. One⁶ was associated with an early tortoise brooch⁷ dating about 850; and Dr. Schetelig informs me that others, which he also considers foreign importations, have been found in Voss (fifty miles north-east of Bergen) and a

¹ *V. C. H. Hunts*, i. 398, fig. 15.

² *V. C. H. Essex*, i. 331, fig. 10.

³ *J. Smirnoff, Oriental Silver* (Russian), pl. lxxix, fig. 121.

⁴ *Proceedings*, xx. 52.

⁵ *Archaeological Journal*, iv. 111, 189.

⁶ *Rygh, Norske Oldsager*, fig. 507.

⁷ *Schetelig, Vestlandets ældste Kulturhistorie*, 76, fig. 98.

little further north in Sogn, besides a fine example from Hauge-sund, Stavanger.¹

There appear to be several specimens of the style in Denmark ; ² in fact, the Carolingian foliage was seized on and adopted with endless variations by all the Teutonic peoples ; and it is therefore just as likely that our pommel was made in England as abroad. If it belonged to the sword of an invader, it was probably brought by a Dane, for it is not much later than the first Danish landing in East Anglia in 866."

Thanks were ordered to be returned for these communications and exhibition.

SPECIAL MEETING.

THURSDAY, 12th JANUARY, 1911.

CHARLES HERCULES READ, Esq., LL.D., President,
in the Chair.

The meeting was summoned to consider the proposed draft of an addition to the Statutes read at the ordinary meeting on 24th November, 1910, and of an amendment thereto read at the ordinary meeting on 1st December, 1910.

The PRESIDENT announced that the Council had taken counsel's opinion with regard to the legality of the ballot of 2nd June, 1910, with the result that the ballot was declared to be, in effect, illegal, owing to non-compliance with the Society's Statutes, due statutory notice of the ballot not having been given. He further announced that the Council had ordered that all the candidates submitted for election on 2nd June, 1910, should again be put to the ballot on 2nd March, 1911.

The PRESIDENT then moved that the proposed draft of an addition to the Statutes be withdrawn.

The motion was carried unanimously.

¹ Gustafson, *Norges Oldtid*, 101, fig. 408.

² S. Müller, *Ordning af Danmarks Oldsager*, ii. figs. 604 (trefoil brooch), 606, 665 (pendant also figured in *Mém. Soc. Antiq. du Nord*, 1890-5, 217).

THURSDAY, 12th JANUARY, 1911.

CHARLES HERCULES READ, Esq., LL.D., President,
in the Chair.

The following gifts were announced, and thanks for the same ordered to be returned to the donors :

From the Author :—Wood carvings in English churches. 1. Stalls and tabernacle work. 2. Bishops' thrones and chancel chairs. By Francis Bond, M.A. 8vo. Oxford, 1910.

From the Author :—Winchester Cathedral. An account of the building and of the repairs now in progress. By T. G. Jackson, R.A., F.S.A. 4to. London, 1910.

From the Byzantine Research Fund :—The Church of the Nativity at Bethlehem. By W. Harvey, W. R. Lethaby, O. M. Dalton, H. A. A. Cruso, and A. C. Headlam. Edited by R. W. Schultz. fol. London, 1910.

From F. F. Fox, Esq., F.S.A. :—Adams's Chronicle of Bristol. 4to. Bristol, 1910.

From the Author :—Military aspects of Roman Wales. By F. Haverfield, V.P.S.A. 8vo. London, 1910.

From the Author :—The coins of the Danish kings of Ireland. Hiberno-Danish Series. By Bernard Roth, F.S.A. 8vo. London, 1910.

From the Author :—The hundred of Sulfretona or Hairidge in early times. By Rev. O. J. Reichel, F.S.A. 8vo. n.p. 1910.

From the Author :—Some South Lincolnshire churches. By W. E. Foster, F.S.A. 8vo. London, 1910.

From Hubert Hall, Esq., F.S.A. :—A select bibliography of palaeography and diplomatic. By Margaret F. Moore, M.A. fol. n.p. 1910. (MS.)

From Harold Sands, Esq., F.S.A., M.I.Mech.Eng. :—Les deux camps de la légion m^e Auguste à Lambèse, d'après les fouilles récentes. Par M. R. Cagnat. 4to. Paris, 1908.

From the Author :—Perkovno Archaologicheskii Muzei S. Peterburgskoi Lykhovnoi Akademii 1879-1909. By Professor N. V. Pokrovskii. fol. St. Petersburg, 1909.

Special votes of thanks were accorded to the editors of *The Athenaeum*, *The Builder*, and *Notes and Queries*, for the gift of their publications during the past year.

This being a meeting appointed for the election of Fellows, no papers were read.

The Ballot opened at 8.45 p.m. and closed at 9.30 p.m., when the following were declared duly elected as Fellows of the Society :

Laurie Asher Lawrence, Esq., F.R.C.S.,
Samuel Denison, Esq.

Edward Dillon, Esq., M.A.
Robert Cleremont Witt, Esq., M.A.
Geoffrey Dudley Hobson, Esq., M.A.
Frederick John Morton Palmer, Esq., M.B.
Rev. Arthur John Beanlands, M.A.
Hardy Bertram McCall, Esq.
Henry Symonds, Esq.

THURSDAY, 19th JANUARY, 1911.

CHARLES HERCULES READ, Esq., LL.D., President,
in the Chair.

The following were admitted Fellows :

Edward Dillon, Esq., M.A.
Robert Cleremont Witt, Esq., M.A.
Samuel Denison, Esq.
Henry Symonds, Esq.
Geoffrey Dudley Hobson, Esq., M.A.

E. KITSON CLARK, Esq., M.A., F.S.A., read the following paper on a Prehistoric Route in Yorkshire :

"The grand movements of prehistoric races are referred to in general terms in many important publications, in none more clearly than in the sectional guides to the British Museum. These documents naturally deal only with the larger features in the conjectural history of the earliest colonization, but they may gain some illumination from a minute examination of definite localities peopled in prehistoric times. Such an examination is proposed in this paper.

And a very good example of the problem is most clearly presented in Yorkshire. Worked flints are found in great quantities on the Pennine Range, the high western boundary of our county, but, owing to the composition of the strata there, they must have been imported, so that two questions arise: firstly, what is the source from which the flints come; secondly, what is the way by which they were brought.

The character of the flints themselves is similar to that of the type found in the East Riding of the county, which not only provides an extensive area of flint-bearing chalk and a gathering of ice-borne flint boulders from Scandinavia, but is itself a district distinguished by extensive neolithic remains. If in addition evidence can be put forward to prove the feasibility of an im-

portant east and west route connecting these two regions, a flint traffic between them in prehistoric times may be accepted with tolerable certainty.

The identification of a prehistoric route involves many considerations: the mode of life and the resources of the inhabitants, the character of the land they chose for occupation, the obstacles which they were able to surmount and those which they could not, the traces they have left behind them, and the possible relation of their routes to those of our time.

Now among the network of modern roads, some stand out as main-line routes, and if there is evidence of use during all historic periods there is strong evidence of the suitability of the route in the unknown ages also. To proceed at once to an instance of this argument a heavy line is drawn on the three coloured maps, *a*, *b*, and *c*, showing the Garrowby—Stamford Bridge—Tadcaster—Bramham road. This passes from the East Riding wolds across the plain of York to the hills which rise finally into the Pennine Range; it traverses a region which has very different characteristics: in one section (map *a*) are the waterless chalk hills of the wolds, in another (map *b*) is the plain of York saturated with the water supplies of the rivers Derwent, Ouse, and Wharfe, and in another (map *c*) are the foothills of the West Riding complicated by stream courses, ravines, and woods.

The argument of continuity of use can fortunately be applied to the central portion of this line, and this in spite of the fact that it lies over country that must have been peculiarly inhospitable to the early inhabitant.

To take its history backwards. In present times this is an important road. In Saxon times its capacity was proved by Harold Hardrada's march from York to Stamford Bridge. On it lie York, the Roman military centre of the north, and Tadcaster with a Roman name, and furthermore relics of the Bronze Age are found at York. The presumption is therefore that from the earliest time there was a track connecting these three places, at each of which a river is crossed: at Stamford Bridge the Derwent, at York the Ouse, and at Tadcaster the Wharfe. Again, take the two ends of this portion. To the east of Stamford Bridge on the wolds are abundant prehistoric remains, while to the west of Tadcaster an accepted Roman road runs past Roman Adel to Roman Ilkley, while at Adel there are also worked flints, and on the Ilkley moors prehistoric burials and monuments. This general line it is proposed to examine in detail. It connects two regions which have one feature in common, a feature which, it appears to me, was essential for the upland¹

¹ There was no sphere for the lake-dweller in this general line.

colonist of the Stone Age, and this feature is that the soil in both districts is too thin to support forests and dense undergrowth.

It is proposed to elaborate this characteristic as an axiom by which that country is to be determined which was occupied or travelled by the early inhabitants, and the argument begins by a consideration of the implements then available. Of these the majority are small in bulk and suitable for quick cutting action upon yielding material, such as flesh of beast, bird, or man, but unsuitable for more stubborn stuff like hard wood or rock. There are found, it is true, a few tools of heavier quality, the weight of which would give sufficient force for such harder work. But the material is not of a kind to retain its edge under a series of continuous and arduous impacts.

The inference to be drawn is that the possessors of the flint implements were unable to undertake the clearance of forests upon any large scale. This view is not to be accepted without argument, and in contradiction of it a well-known experiment in Denmark may be referred to.

In 1879, in the presence of distinguished archaeologists, a number of fir trees were felled, trimmed, notched, and fitted together by means of flint implements, and thus a log hut was made.¹

It was a brilliant performance, but the trees were spruce of only about 8 in. in diameter and were felled when they were soft with sap in June, and the stubbing-up process necessary to render soil suitable for serious colonization is not touched upon.

I have also made some experiments with a flint axe, and while the mediocrity of an amateur's skill may discount the value of my conclusions, the experience was sufficient to persuade me that the flint axe, while effective in dealing with soft-wood trees of small size, would make very slow progress in bruising its way through the tougher of our forest trees. The only resource would be fire, but fire would not be very promising in our damp climate. Therefore, though I recognize the great interest of the Danish achievement, I am inclined to hold that the Stone Age man selected land clear of forests for settlements and routes.

The discoveries on the wolds of East Yorkshire, the moors of West Yorkshire, the South Downs, Salisbury Plain, the bare spaces of Carnac and the sandy tracts and spare heaths of Denmark bear out this contention. I only speak of districts which I have examined.

It may be urged on the other side that such discoveries have been made in such regions because the soil has generally been too

¹ *Archæologiske Undersøgelser*, 1878-81, pp. 3-13, 'Et Træhus bygget med Redskaber af Steen.'

poor for the destructive attention of the enterprising agriculturist. This is obvious, but it is at least probable that had the neolithic occupation been as thick on rich lands or in forests the discoveries there would have been more important than they have been. Assuming, then, the predilection of the Prehistoric for a thin-soiled district, I would now transfer the inquiry to a country which not only retains more than any other the relics of prehistoric times but seems to present a recognizable scheme in their disposition.

A large portion of Jutland in Denmark is still uncultivated because of its unfertile sandy surface; from the immense num-



Fig. 1. ELLEBARK, NEAR HOLSTEBLO, JUTLAND.

ber of gravemounds which remain, that most distinguished archaeologist, Dr. Sophus Müller, director of the National Museum at Copenhagen, has been able to work out a scheme of the prehistoric occupation of a selected tract.

In his *Routes et lieux habités à l'âge de la pierre et à l'âge du bronze* (Copenhagen, 1904) he examines an area in Jutland of 80 by 94 kilometres, and gives a very interesting series of maps to elucidate the routes and settlements of the Stone and Bronze Ages.

The basis of his argument rests on the theory that the burial-mounds of that time were closely associated with settlements and routes; and he is able to divide them generally into two classes, clusters and series, the first of which he refers to settlements (map 5), the second to route lines (map 1).

The latter are so remarkable that a careful investigator of the Government maps might arrive at the same conclusion, even if he had not the advantage of Dr. Müller's skilful direction. When, however, he has studied Dr. Müller's minute and exact

descriptions, and when he has travelled along the lines on foot or bicycle, and noted their relation to the configuration of the country, the theory about the routes becomes to him an axiom, and when the series are accepted as routes, the groups work out naturally as settlements. I would then proceed to the examination of the position in which these lines are found. Now the main obstacles in Jutland are lakes, swamps, and water-courses, steep sides of shallow ravines, and desert wastes, and the difficulty which must have been prominent in Britain, namely tangle of forests, does not appear generally in the district immediately under examination.



Fig. 2. TOSTRUP, JUTLAND.

The investigation in Denmark is simplified by the absence of geological complications, the dominating characteristic there being due to water influences acting upon sandy uplands; there are no rocks to cause obstruction, and the rain is collected in large marshy basins each of which is relieved by a definite stream.

Whichever way the general line of the water may lie, the drainage system had to be continually crossed by the earliest traveller, and the points of crossing are usually found where the water is concentrated into a stream with firm banks that come sufficiently near each other to form a miniature gorge. Such a point is found where the main valley is joined by its small tributaries; the main body of water has carved its way sufficiently deeply to leave slopes of 50 to 60 ft. or more in height along its course (map 5), and through these banks the tributary streams which gain their volume from the extended swamps in the hinterland have cut their small ravines.

At the cutting the crossing would be shortest, and the footing on either side firm and dry. It is further probable that there

would be a settlement at a recognized crossing-place over a stream where it flows out into the main valley. Beside the fact of the concentration of traffic there is the vegetation which springs up at the edge of the well-watered valley floor (map 2), a vegetation encouraged by the talus of weathered débris and decayed desert plants which tends to accumulate at the bottom of the slopes and to produce a humus which would attract the first agriculturist. There is also at such a place the proximity of cover for game and the accessibility of drinking water.

The traces of occupation accord with this reasoning, and there are often considerable clusters of burial-mounds at these fords (map 3 and fig. 1), while, connecting adjacent fords, there are series of such mounds which presumably follow route lines like the tombs along the famous Roman or Greek roads (map 5).

There is another physical feature in certain parts to which Dr. Müller attributes an archaeological significance. Where a route which he has established by the evidence of barrows crosses perforce a sharp brow, there is at times a deep indentation on the exact line, at times a parallel series of shallow furrow-like depressions, and in these he sees the actual tracks of the prehistoric man (cf. p. 321). These may have extended to a great width, as they do on the high-road across the steppes of Siberia, where a modern traveller has noted wheel-tracks over a space of four to five miles.

In Morocco, the only unconfined country with which I am acquainted, the tracks which form the routes spread side by side as each gets worked out and cut up where the land is open enough to allow such divergence, but where a steep bank is to be traversed, it is cut by a single and deep depression, and this experience tends in a small way to confirm the conjecture to which Dr. Müller's wide knowledge gives the real weight.

In conclusion with regard to Jutland, it should be added that in no instance do there appear trenches which can be interpreted as contemporaneous defensive entrenchments. The only example which is noted is considered to be a line drawn in a later age across an earlier road.

The evidence in Yorkshire is unfortunately not sufficient for such attractive mapping, but the phenomena to which attention is directed in Jutland may be looked for *mutatis mutandis* on our side of the German Ocean.

In general the routes should be sought for on country naturally devoid of thick forests, they should miss sharp ravines, but not be far away from the definite valley heads (map 4). If there are broad basins of water-gathering ground, the routes should avoid them and cross the outflowing streams where the dry banks are nearest together (map 5); further, there is reason-



Map 1 (Sheet Z, 19).



Map 2 (Sheet Q, 18).

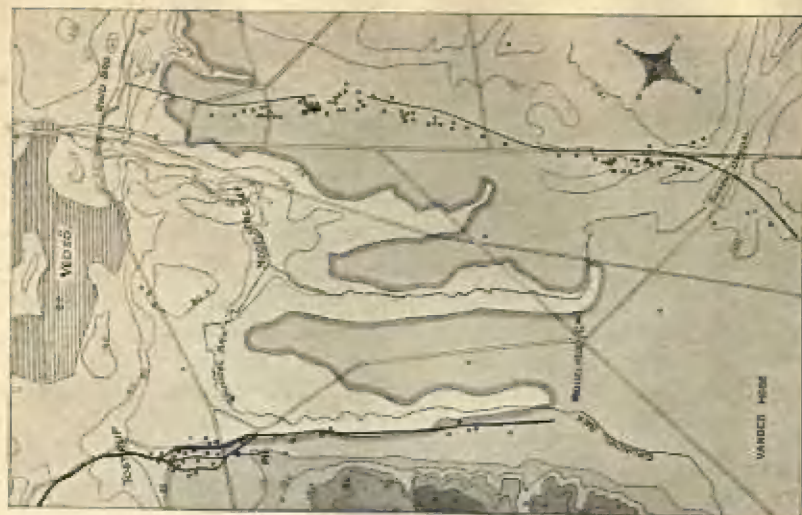


DESCRIPTION OF MAPS 1-5.

The maps are traced from the 200,000 Government map, reduced one-half. The contour lines, which represent differences of level of 10 feet $3\frac{1}{2}$ inches, are either dotted, full, or arcuated with shading. The black lines are route lines suggested by Dr. Sophus Müller in his book and deduced by him from the presence of burial-mounds which he has noted himself. They are shown on the Government map and have been observed as well by the writer. Modern roads are shown by double lines. The general deductions required by this paper have been given in each case.

1. FARJERG. The remarkable direct alignment of 9 mounds extending over 1,900 metres in the portion above the centre of the map involves a relationship which can only be explained by connecting them with a route line.

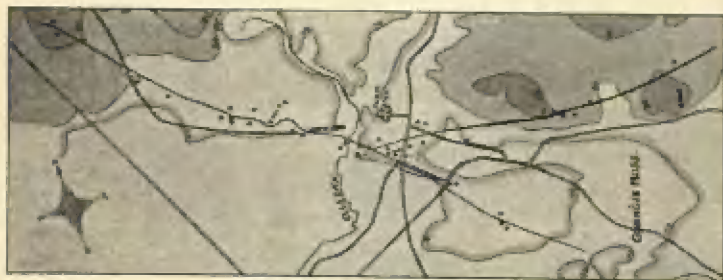
2. MÖGELKJER. A line between the foot of a continuous slope and the swamps of the valley floor.



Map 5 (Sheet P, 17).



Map 4 (Sheet Q, 16 and 17).



Map 3 (Sheet X, 17).

3. **ELLENÆK.** A group of mounds which mark the junction of routes, and also a crossing-place over a stream; a panorama of these is shown in the photograph (p. 312) taken from the point on the map marked PH.

4. **HAVREDAL.** A line on a plateau touching the heads of ravines which contain vegetation and water.

5. **TOSTRUP AND RIND.** The group of mounds at Tostrup is one of the best in Denmark. Its general appearance is given in the photograph (p. 313) taken from the mound marked PH.

The Rind-Skavdybdal line shows where two streams are crossed and the connexion between the fords. In both cases the crossing has been made where the stream escapes from a marshy hinterland, has become concentrated, and made a gorge in the wall of a main valley.



THE FIGURES REPRESENT HEIGHTS IN FEET ABOVE SEA LEVEL AND THE LINES ARE 100 FEET CONTOURS. THE EARTHWORKS DISCUSSED IN THE PAPER ARE MARKED BLUE. BARROWS BY BLACK DOTS. THE SUGGESTED PREHISTORIC ROUTE BY A SOFT RED LINE.

able probability of a continuance of the use of a route into mediæval times, and there is no presumption for expecting contemporaneous defensive earthworks. Moreover, the contours of hilly country must be carefully noted. The vicinity of game areas, such as swamps and woods, must be taken into account.

In our land of comparatively low altitudes and few unclimbable hill-sides the roads cannot be determined like the grand routes of middle Europe, which are there connected with the mighty rivers, the Danube, the Inn, the Moldau, the Elbe, &c.;¹ also in Yorkshire the surface is extremely diversified, there are the Fens bordering upon the Trent and Humber, the streamless chalk wolds between the North Sea and the Derwent, the alluvial plains of the vales of York and Pickering, the moorland gorges of the north-eastern region, the foothills and the mountain wastes of the Pennine Range deeply engraved by streams. It is a complicated and fascinating country upon which to seek for the lines of prehistoric travel, and yet it will be found that the main principles which are written so clearly in the simpler terrain of Jutland apply with equal force in Yorkshire. The route with which this paper is immediately concerned will be sufficient for the evening, while the reasoning thereon may, it is hoped, be found useful in a similar study in other regions. For while the general lines of prehistoric routes are vaguely accepted, I think that their importance has been overshadowed by the records of finds, and that the detailed survey of every route adds to the interest, and may contribute to an increase of knowledge, of the prehistoric occupation.

In the first place, we have in the instance here mapped out an *existing* road, which observes the rule of avoiding unnecessary descents and which links up regions where the soil is unsuited for forests.

Its relation to the contours is clearly seen on the three coloured maps *a*, *b*, and *c*. Starting from the east the chalk wolds may be likened to a thin book on the slope with a high corner in the north-west and the sharply descending sides on the north and west (see coloured map *a*). Therefore the greater part of the rainfall falls on and is drained off the more slowly sloping surface towards the east and south. The result is that the latter portion is cut into channels which have been carved to a remarkable depth by water they cannot hold. On the steeper sides of the system the excavation by water is equally severe, but less extended.

In consequence we have long gently sloping ridges to the east attacked by deep and winding valleys, on the west steeply descending promontories between depressions like amphitheatres.

¹ *B. M. Bronze Age Guide*, 1904, p. 95.

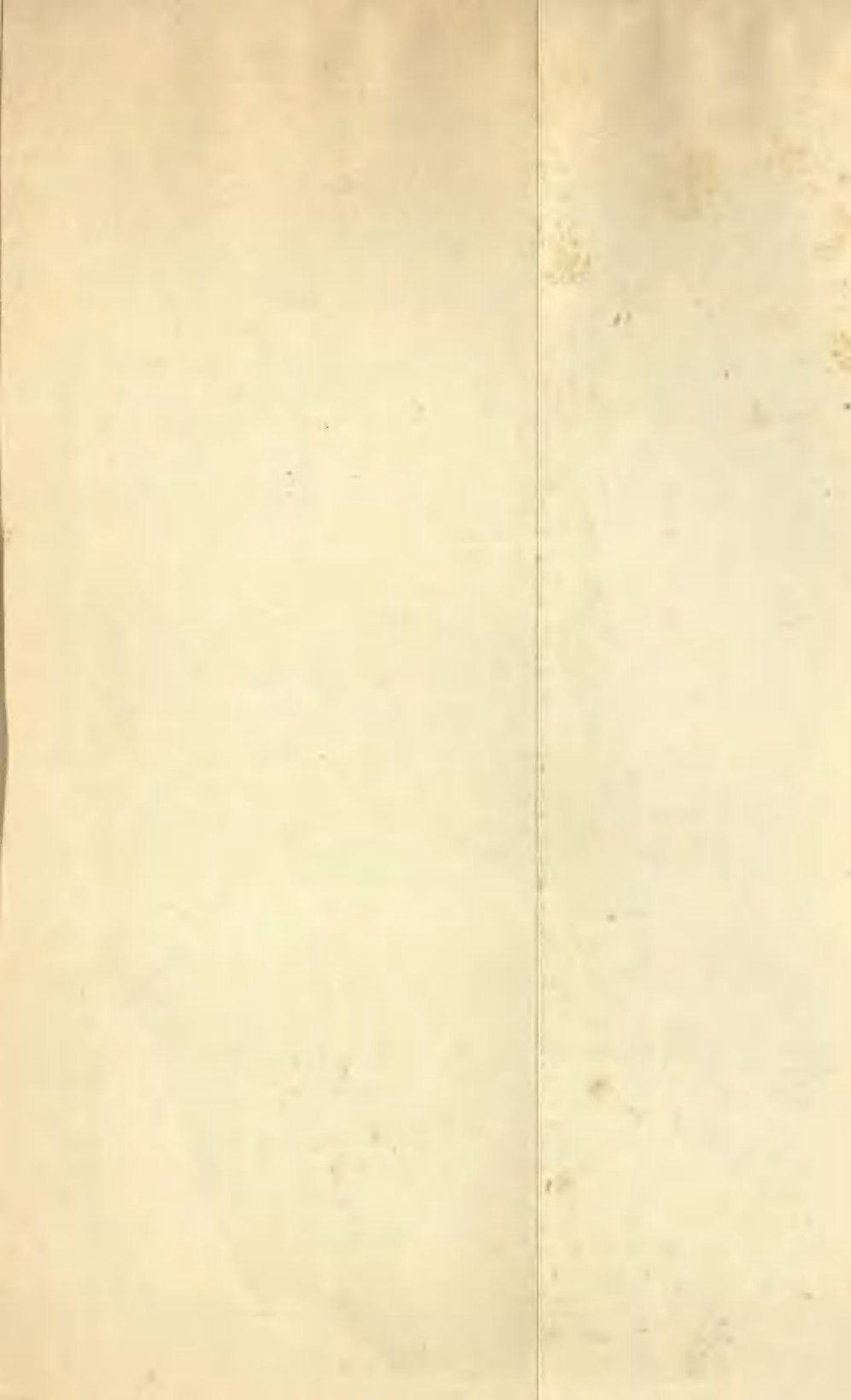
One such ridge is conveniently aligned with a promontory where Garrowby Street now runs; the valleys eat into its sides to within a few yards of the summit, leaving, however, a space amply sufficient for a traffic line. Along this high ground, which could never have borne forests, there still remain a few great barrows (marked by black dots) which, like those in Jutland, are practically aligned, and for these reasons it is certain that this ridge was the line of a prehistoric route (marked by a thick red line). And an important route it must have been, because it points towards and across the plain of York, across the inhospitable swamps, over which a way could have been found at this point alone. For, sweeping in a great arc across the plain (see coloured map *b*), there arise on this same alignment the terminal moraines (shown by the contour lines) of the glacier which once descended from the north, and on the ridge thus rising well above the swamps runs the modern road which we wish to identify with the prehistoric route. Its nearest connexion with the wolds to the east is by Garrowby Hill, it passes the Derwent at Stamford Bridge, the Ouse at York, and the Wharfe at Tadcaster. The crossings are effected where each stream is confined by the moraine mounds and concentrated exactly as we found in Jutland. The marshy ground is avoided as it was over there; and we have the evidence of prehistoric as well as Roman relics at York, the central station of the three.

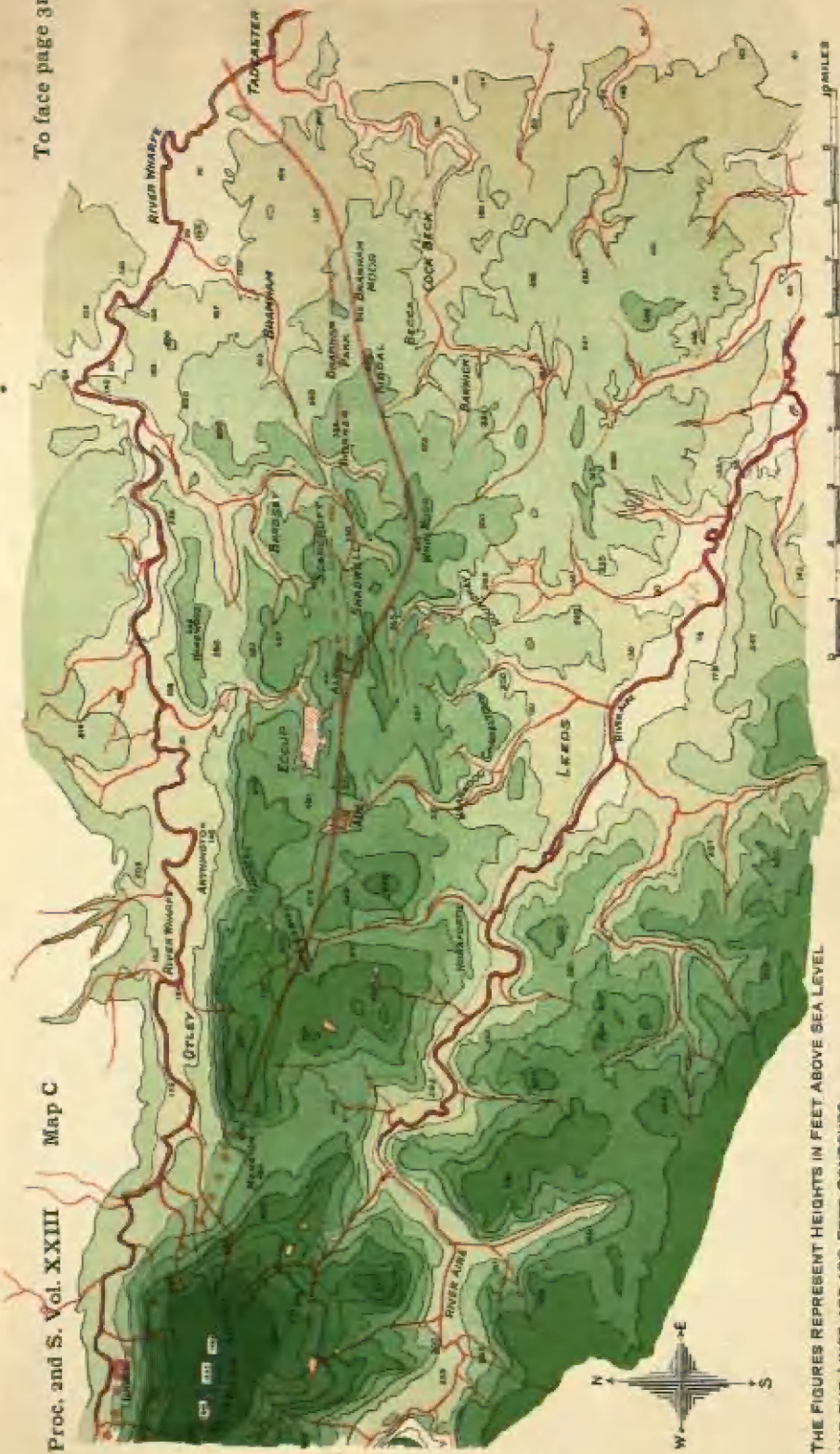
From Tadcaster westwards the evidence is hypothetical, but an examination of the coloured map *c* and the presence of Roman and prehistoric remains at Adel and Ilkley give probability to the theory that the original route subsequently followed by the Romans proceeded by those places to the high moors in the west, where prehistoric relics are frequent. If it can be assumed then that those moors were the objective, the same kind of reasoning as above can be applied to this westward portion. In order to be clear of river difficulties the route must avoid the Wharfe on the north, the Aire on the south; and as these two rivers approach to within $3\frac{1}{2}$ miles of one another at Menston, 19 miles to the west of Tadcaster, the general direction must be to that point, especially as on Rom-balds Moor above Ilkley, 4 miles further westward on the same line, important discoveries have been made which record the presence of prehistoric man; and because further to the west, and still between the two rivers, access is obtained to the great seas of high moors with which we seek to make a connexion. Into this triangle of ground several considerable becks have cut their crooked valleys. The watershed between them winds in and out as each stream extends its operation on one side or the other; and the country is as difficult to read now as it must



THE FIGURES REPRESENT HEIGHTS IN FEET ABOVE SEA LEVEL AND THE LINES ARE 100 FEET CONTOURS. THE EARTHWORKS DISCUSSED IN THE PAPER ARE MARKED BLUE. BARROWS BY BLACK DOTS. THE SUGGESTED PREHISTORIC ROUTE BY A SOFT RED LINE.







THE FIGURES REPRESENT HEIGHTS IN FEET ABOVE SEA LEVEL

AND THE LINES ARE 100 FEET CONTOURS.

THE ETCHED PORTIONS ARE SHEETS OF WATER.

THE SUGGESTED COURSE OF THE PREHISTORIC ROUTE IS MARKED BY A SOFT RED LINE; SOLID, TADCASTER TO OTLEY CHEVIN VIA WHIN MOOR; DOTTED, OTLEY CHEVIN TO ILKLEY. THE SUGGESTED LATER ROMAN SHORT CUT BY A BROKEN LINE FROM ELEVATION FIGURE 137 (S.W. OF TADCASTER) VIA SCARCROFT TO ALW. = (ALWOODLEY).

ROMAN CAMPS AT ADEL AND ILKLEY ARE MARKED BY RED SQUARE BLOCKS.

have been to the prehistoric road surveyor. A Roman road *viâ* Bramham, Alwoodley, Adel, and Otley Chevin to Ilkley is marked upon the ordnance map, and is accepted by Mr. Codrington. Except for one short-cut by the Romans at Thorner it is the best line that prehistoric man could choose between Tadcaster and Adel, with its flints and Roman camp. It avoids the spreading and wooded valleys of the Cock beck and Bramham beck, it lies on the longest stretch to be found of soil thin enough to be free from impenetrable thickets.¹ It clings to the watershed between the Eccup stream and the eastern tributaries of the Meanwood beck, until it arrives at the initial gathering ground of the latter.

This proves to be an extensive and marshy basin not unlike those in the uplands of Denmark, and here the same rule holds which was inferred from observation in that region, for the crossing is made at the point of emergence of the stream. The spot selected is still emphasized by the Roman camp at Adel and by the presence of flint implements and chippings.² This camp was an important station to the Romans, who undoubtedly quarried the stone which conveniently outcrops at the gorge made by the escaping water, and there have been found in the near neighbourhood great quantities of worked flint. The conjectural Roman route, it is true, is not continuously represented by existing roads, but it is generally accepted by competent authorities, and the portions still in use present the appearance usually associated with Roman roads, the diversions being probably due to the extensive enclosures of the eighteenth century. After passing the Meanwood beck at Adel, by adhering as far as possible to one contour we arrive at a point which has a romantic geological history, for the drainage area of the Adel beck has been invaded by a more energetic stream. This beck, which runs south to Horsforth, has attacked and pierced the walls of the large basin, and the route has perforce to find a second crossing at the western side of the basin, which it secures as in the former case, where the rocky sides close in upon the water-course at a spot named *None-go-Byes*.³ Afterwards the route rises steadily up a ridge that lies between two serious depressions that according to the habit of the country must have been filled with impassable vegetation.

It has now arrived at the bare and unencumbered tract, the

¹ A curious confirmation of the semi-sandy nature of the ground is to be found in the existence on the actual line of three separate golf courses.

² A stone axe has lately been found at a quarry very near this spot: the circumstances of the discovery are genuine and the axe is probably genuine also, but the material, grit, is unsuitable for hard usage.

³ There is a happy infelicity in the name, which denies a route, and proves it, having been taken from a public-house thereon.

high land of the Otley Chevin, which conspicuous hill it leaves in the best position for traversing the Menston slack and so passes to the high moors of the west to which we have been seeking an access. This portion of the route is dotted, as it is less demonstrable than the rest.

It will be objected that proofs in the way of relics are wanting, but the main idea of this paper has been to draw on the map a line which follows the main principles laid down at the outset, namely the choice of thin soil, the avoidance of swamps, of forests, and of changes of level, learnt from Denmark.

If the analogy with routes in Denmark is admitted, one other point stands out very clearly, and that is, we are not to associate with the prehistoric settlement of the country any system of defensive earthworks. There may have been occasions for display of physical force; for instance, there are certain stone implements, beautifully finished, and too slender for continuous usage, which are never found in a bruised condition, but are always either perfect or broken as it were by a single blow, and are consequently labelled in the museum as battle-axes. But the impression persistently asserts itself that the traces we find are of people who in the Stone and Bronze Ages were spreading their spheres of settlement in peaceful victories over the difficulties of nature.

If this be so, what is to be said of the long ditches of the Yorkshire Wolds which have, by common custom and the nomenclature of the ordnance map, been called entrenchments?

To those I wish to return for my concluding remarks (see coloured map *a*). They stretch sometimes in long lines across the swell of the chalk uplands, sometimes high up along the edges of the steep-sided waterless valleys, sometimes up and down these sides, in places are recognizable for 500 yards, in others for 15 miles; and yet, remarkable as they are to see and carefully explored as they have been, they still seem to require some general explanation.

The component parts are ditch and embankment, which are single, double, and at times multiple; they are best preserved on a steep slope or at the edge of one, or where modern plantations of trees have been made. Their contours have been affected by weathering, and they have often been levelled by the plough. For many spots, however, where they are not now apparent, we are fortunate in having the valuable evidence of the Rev. E. M. Cole and Mr. Mortimer,¹ which generally confirms the records of the 6-inch ordnance map.

Their extent is too great and their disposition too involved to

¹ *Forty years' researches in British and Saxon burial-mounds in East Yorks.* : A. Brown & Sons.

permit the theory that they were used as defensible frontiers. The multitude which would be required to man them could not have been supported by the produce of such a soil; they do not face consistently against any one quarter, for they include cross lines like those near Cots Nab farm (see fig. 3) which could not fail to be sources of weakness. In this they are entirely dissimilar to the well-known Danes' Dyke at Flamborough, Devil's Dyke at Newmarket, and other instances of a ditch in front of a mound thrown like a bar across a line of route on a watershed. As a protection for flocks against savage



Fig. 3. COTS NAB FARM, GARROWBY STREET, EAST YORKS.

animals, they would be futile unless surmounted by palisading, which would have required a supply of timber, and timber workers, far exceeding the capacity of the wolds. The term 'Hollow-ways' has been given to them, rather under the impression that as the trench was deep and the banks high enough to conceal a man on horseback, their use was a protected line of communication, and it has been suggested that there might have been coverings across from ridge to ridge to increase the protection or even make a sort of barracks. I am inclined to reject the idea of any strategic intention in these lines, and hold that they were simply and solely roads, any defensive capacity that they might prove to possess being merely a by-product. These 'earthworks', to adopt a neutral term, are shown in map *a* in blue, and by the use of a small scale a sufficiently comprehensive

view is obtained to suggest a connexion between the different sections.

The *first* obvious characteristic of these lines is that some connect valley heads, as at Deep-Dale, Huggate Dykes (fig. 4); the *second*, that some carry on with negligible breaks an alignment across the undulating lower ground for several miles.

These points show up clearly on the map; there is also a *third* characteristic equally interesting, but difficult to detect on the small scale, namely, that where there are deep valleys these earthworks run on one side of the valley, at the actual junction between the steep uncultivated slopes and the gently swelling upland.

If a strategic solution is rejected, there remain two others, that we have here either boundaries or tracks; and perhaps it may prove that there is truth in both. Having traced the prehistoric route on the principles suggested at the beginning as far as Fridaythorpe (see red line on map *a*), we find lines of earthworks which diverge from that point and seem to be continuations or feeders of the main line.

The lines which skirt valleys or descend to the valley floor at definite points scarcely seem to belong to the earliest prehistoric system, but they are suitable for lines of travel, and indeed a close study of their phenomena on the ground leads the investigator to adopt the conclusion that all are component parts of a network of routes which developed as time went on.

This arises from the general distribution of the earthworks; but why, one at once asks, should routes be embanked, and of what period are they?

In order to consider these questions, it is necessary to imagine the various conditions under which roads have been worked out. In the early prehistoric times, when travellers were on foot and practically unshod, there would be little wearing down of the soil surface; at the present day the native in the less civilized parts of the world fares along on his way without much system, stooping perhaps under his burden, looking downward, and his tracks are devious and uncertain.

I give as an instance a modern route in Palestine which was prehistoric and Roman also: that from Judaea to Philistia, where the tracks wander over the open and are only drawn together at the defile in the distance.

So in Europe the padding of unshod feet would beat the ground into a smoothish surface, but make little depression, and unless the wear and tear of traffic was concentrated by an obstacle the soil was practically unmarked.

Such people would not have scored the lines on the face of the wolds which we are endeavouring to explain. But supposing

in a later period men had to drive cattle from pastures of one kind to pastures of another, from the upland to the valley, to watering places as suggested in Mr. Hubbard's fascinating book¹ (and a pond (modern) will have been noted in a previous view (fig. 3)), we can imagine that a definite track was quite necessary. This track would be ground into dust in dry weather, in wet it would be trampled into mire, and the mud might be taken up



Fig. 4. HUGGATE DYKES.

and deposited at the side of the track just as happens in our own day, so that in course of time a lane like those we know in Devonshire would be produced, but much narrower, and there might be this use in a track so marked as to act as a guide to a string of cattle: the banks even might be accentuated purposely to prevent straying, especially on the edge of a dangerously steep valley, such as Deep Dale. Further, where two or three tracks met, such as those from the bottom of a valley and those on its top edges, the traffic might require more accommodation than that provided by a single line. Such a place would be on a col, as at Huggate Dykes (see fig. 4), where a halt might be required after a climb, where the traffic might at times become

¹ *Neolithic Deepponds and Cattle Ways.*

congested, and at the same time it would be necessary to keep a distinction between the different herds, and I do not think it would be by any means unlikely that at such places there should be several tracks, and as these cut deeper and deeper down, there being no metal for repair, more lines would be required, and so in long years of use those complications of ditches and dikes might be brought about which seem so extraordinary, at Hug-



Fig. 5. COCKMORE HALL TRENCHES, SCAMRIDGE DYKES, YORKS.

gate Dykes on the wolds, or, again, Scamridge Dykes (see figs. 5 and 6), on the north side of the Pickering Valley.

On the slopes of the lower, more open, and more easy valleys the lines are not in the present day continuous as earthworks, but sections remain, as at the Sykes monument (see coloured map *a*) on the southern line, and at a point 3 miles north-east of Sledmere on the line that runs from that point, and these sections exhibit the same elements as Huggate Dykes; that is, one or two ditches with quite noble side mounds approximately 10 yards from ridge to ridge.

In the first case the line is continued for a longish distance on the watershed by an old very wide road, either grass-grown or very badly metalled, called at its eastern end Woldgate. In the second case the lost earthwork is to be recognized in places only by a streak of chalk on the plough-land.

But of this, as of the Argam Dykes to be next noted, there is good evidence from living memory. Turning then to the final instance, the Argam Dykes: this line, though lost in many places, can still be traced by a swell in the plough-land, by shallow ditches and low mounds in the grass by Argam, and by gaps in the hedges, where posts and rails are substituted for thorn. The hedge gaps were explained to me by an old farmer who pointed



Fig. 6. SCAMRIDGE DYKES: RIDGE AND FURROW, SOUTH-WESTERN END OF TROUTSDALE, YORKS.

out the line: he said he knew these dykings from being a boy; he thought they must be 'trods', for where the hedges ran across them they were 'ower hard for the hedge to grow' and it was cheaper to fence across them with posts and rails than to dig out for proper planting. These 'dykings he minded' ran over the hill to Rudstone. The coloured map shows this, and there at Rudstone, on a promontory clearly visible from the confluent valleys and from the routes which I think lay on the surrounding hills, there stands, just as on a Danish route, an early church, near barrows containing cists, and beside them, more significant still, the wonderful Rudstone menhir. To myself, who have carefully travelled these parts of Yorkshire, the deduction seems irresistible that in these lines we have a track system beginning in prehistoric and carried on through all ages. But I am too conscious of the

attraction of one's own arguments, so that I put the ideas which arise in the form of questions.

Is it the case—(1) that the first travellers selected the bare unfertile country for their route and, passing, have left their barrows and occasional lost implements to mark their way, but have engraved no impress on the surface of the soil? (2) That their successors, who also made barrows for the dead or used existing ones, had cattle or pack-animals and drove them to market or watering place in sufficient numbers to score furrows in the ground; that where the mud made the pathway impassable they



Fig. 7. DEPRESSED TRACK PASSING ROUND A BARROW NEAR ACKLAM WOLD.

threw it out on the sides, thus raising the bank (the natural complement of any furrow) still further above the general slope of the land, and that they found advantage from such an embankment in the control of their herds? Fig. 7 shows the relation of a depressed track to a barrow; as the track passes round the barrow the track appears to have been made after the barrow, and similar cases on Scamridge Dykes in the North Riding can be adduced. (3) That into the narrow pack-animal- or cattle-tracks came later men who had developed wheel traffic, that made the road-bed broader and the side banks higher, and that after them no great difference came in until the Roman genius changed the whole idea? (4) That the Romans used (if they did not discover) the invention that a road can only be preserved by raising its surface above the land? That they used one of the side mounds of the existing track, as at Garrowby Street, East Riding, or they cut off corners where they found themselves safe, thus saving building material, as at Thorner, West Riding (dotted on map c), and so have left their sign on many

maps in the direct alignment of through roads, or the name Roman Ridge in the fields? After the Romans should come historical records, but that is another story, largely unknown, I fear, and rather for the consideration of the learned than within the scope of this paper."

REFERENCES.

Rev. G. Maule Cole, *East Riding (Yorks.) Antiquarian Society*, vol. vii, 'Roman Roads in the East Riding.'

Professor W. Boyd Dawkins, *Archaeological Journal*, vol. lxi, no. 244, pp. 309-13, 'Pre-Roman Roads of Northern and Eastern Yorkshire.' In the Report of the Manchester and District Branch of the Classical Association for 1905 he also gives general considerations about prehistoric routes.

Dr. G. Auden, in the Survey of York prepared for the seventy-fifth meeting of the British Association, 1906, pp. 1-14, has compiled in most concise form the prehistoric relics of Yorkshire, and has noted therein the moraine mounds across the plain of York as the course of prehistoric men from east to west. My conclusions were thought out three years later, *de integra*.

Robert Knox, *Eastern Yorks.*, 1855, does not add much.

T. Codrington, *Roman Roads in Britain*.

British Museum: (1) *Stone Age Guide*; (2) *Bronze Age Guide*.

Yorkshire Geological and Polytechnic Society, Proceedings, 1891-4, vol. xii, part iii, concerning Glaciation of Yorkshire.

Mr. REGINALD SMITH congratulated the author on the use he had made of the paper on prehistoric roads in Denmark by Dr. Sophus Müller of Copenhagen, honorary Fellow of the Society, who so jealously guarded the antiquities of Denmark as national monuments. The enormous advantages of protection by the State were everywhere recognized, but perhaps nowhere so fully enjoyed as in Denmark. An undrained and uncleared area might have deterred the prehistoric population from making a road, but forests had no terrors for the Romans, at any rate in the south of Britain, both the Weald and Rockingham Forest, for example, being crossed by Roman high-roads. The paper implied a large amount of research and exploration, which might be expected to lead to interesting results also in other parts of Britain.

Mr. DALE observed that the ponderous axe-hammer, exhibited by the author to illustrate prehistoric activity in the area served by his road, bore every mark of authenticity, though the allusion to it in the paper might suggest an opposite conclusion. There were three or four deeply cut parallel ways in the chalk area near Winchester resembling those on the Yorkshire Wolds.

W. R. LETHBRIDGE, Esq., F.S.A., read the following paper on some Early Christian Objects at the British and Victoria and Albert Museums:

"At the British Museum there is a small gallery where an

excellent collection of typical Early Christian objects is shown; they have been admirably catalogued by Mr. Dalton. This work and the small guide to this Early Christian and Byzantine section are the best textbooks on the subject we have in English. Besides this special group there are many other objects which are almost necessarily classed with other collections, as gold work, ivories, and MSS. There are also others in the Greek and Roman and Egyptian Departments which I should like to see transferred to a stronger Early Christian section, and some of these are either unrecognized or are not made known.

Stone. In the Mausoleum Basement is a sarcophagus (no. 2320) of late Roman work, quite a contemptible thing from the point of view of classic art, but if it is Early Christian, as I believe, it becomes an object of first-rate importance (see illustration). It was well engraved in *Museum Marbles*, 1826 (part v). It is there described as 'a sarcophagus on the front of which is represented the marriage feast of Cupid and Psyche. In front of the couch is a small tripod table on which a fish is placed. Some of the attendants play on musical instruments, others bring fruit, wine, and offerings; each is represented as a Cupid or as a Psyche.' In the last *Catalogue of Greek and Roman Antiquities*, 1904 (vol. iii, p. 330), it is described very fully, but there is no suggestion of the possibility of its being Christian. I take from it the following points: 'Cupid and Psyche recline half draped. Before the couch is a table, on it is a fish. Beside it is Cupid's quiver. A small Cupid offers a bird. On the right a wingless Cupid stands with lyre and plectrum. Beyond him is a winged Cupid bringing a wreath and fruit, and another bringing a rabbit. On the left is a winged figure as of a Psyche, seated in a wicker chair and playing a lyre of peculiar form. Beyond her is a girl, originally winged, with a jug, accompanied by a bird, and a Cupid with his cloak full of fruit. Third or fourth century.' A restoration of the hand of the girl to the left is now removed. I will now describe it as it appears to me. Cupid and Psyche recline at the banquet. The figures, contrary to wont, are almost fully draped, and Psyche looks intently into the face of Cupid. He holds a wine-cup, and beneath his hand is a roll in a basket, possibly the Gospel. In front is the table with the significant fish; the ends of the couch also have the fish form as found on Christian ivories. The attendant Psyche, who plays a lute, sits in a high-backed wicker chair, such as are frequently seen on Christian ivories; the table which supports the fish is of the three-legged type which appears in the catacomb paintings. Beneath the god a boy plays with a bunch of grapes and a young goat or rabbit, while above another winged boy releases a bird, a well-known symbol of the flight of the spirit in death. At the head of the bed is Orpheus



SARCOPHAGUS IN THE BRITISH MUSEUM, REPRESENTING CUPID AND PSYCHE.

or a Cupid in the attitude of Orpheus—I think the former; he holds his lyre in the traditional way on his upraised left knee, his left foot resting on a peacock, the well-known symbol of immortality.¹ Further to the left and right are two pairs of figures, possibly the Seasons, who frequently appear in the Catacombs. At each end is a fruit tree. I need not say that the subject of Cupid and Psyche was taken over into Christian art; the restraint on one side and the intensity on another, as well as many details, convince me that we have here a remarkable work of the Constantinian age, when new wine had so largely to be put into old bottles. I consulted Mr. Dalton nearly two years ago, and about a year later he told me that Dr. F. Dölger of Rome was interested in the sarcophagus from a similar point of view. I also consulted Dom Leclercq, who wrote the article ‘Psyche’ in the great French Dictionary of Christian Antiquities, and he was so good as to write to me as follows: ‘I have considered the sarcophagus and entirely agree with your way of seeing it. The date appears to me to be of the fourth century. The characteristic way in which Psyche and the other young girl wear their hair appears to be that described by St. Paulinus of Nola. The fable of Psyche, and the Seasons, are in the taste of this epoch, and the work is not superior to many pieces of sculpture influenced by the Constantinian renaissance. As to the Christian interpretation the reserve of the treatment of the subject makes it very likely, and the presence of the fish is in fact so interesting, so characteristic, that we may not hesitate.’ Later the learned author has been good enough to send me two references to German works where our sarcophagus is referred to,² one as early as 1900. Such an Early Christian sarcophagus of mixed style should be a great treasure in any museum.

There are other late sarcophagi which have some relations with Christian works, notably one in the same annexe, a fine example of what is known as the Sidamara type, a class to which belongs the famous fragment at Berlin which contains a figure of Christ, probably of the third century. The front of another somewhat similar sarcophagus from the Towneley Collection is fixed high up on the wall above the office door—so high that nothing more can be said of it.

Hidden away in what is known as the ‘Sepulchral Basement’ is a capital of the fifth or sixth century, with crosses in high relief in the centre of each side under the abacus, a good deal like the Constantinian capitals at Bethlehem. This one is, I should

¹ The peacock is frequently seen with Orpheus.

² C. M. Kaufmann, *Forschungen zur monumentalen Theologie*, t. i, Mainz, 1900, p. 24, fig. 5; and F. J. Dölger, IXΘYC, in the *Römische Quartalschrift*, 1909 and 1910.

say, of the marble of Constantinople. It should be transferred to the Early Christian section from this dark cellar. In the Egyptian Gallery there is now a considerable collection of Christian architectural fragments, which are described in a somewhat fanciful manner. No. 1334, a piece with interlacing bands and other ornament, is described as a 'slab with the cross, vine leaves, and the crown of thorns symbolizing the Eucharist and the Passion'. No. 1423, an interesting niche-head with vine growing from a vase, is called an 'apse'. No. 1483, a capital from Abydos, might be a twelfth-century Western work.¹

Mosaics. On the walls of the N. W. staircase are several fine mosaics from Carthage, some of which are Christian. One which is probably of the fifth century is covered with semicircles rising from chalice-like vessels; in the interspaces are peacocks and other birds, and in one place a hart and hind are drinking from a fountain of four streams lettered FONTES.² About six years ago I pointed out that this is a very interesting Early Christian work, but still it appears in the Greek and Roman Guide (1908) that 'these mosaics belong to the Roman period', and on the label it is described as no. 7 mosaic: 'Fountain with Deer and Hare drinking. Arcade.' There is ample and absolute proof that the thing is Christian; moreover it is perfectly obvious.

In the Christian Gallery at the Louvre is a portion of a pavement brought from Carthage in 1901. Here similar animals appear, and stag and hind again kneel as they drink from the four streams of the Gospels. This is said to have come from a baptistery, and comparing it with another mosaic of similar design discovered in the Baptistery of Salona, where the subject was explained by the verse, 'As the hart panteth after the water brooks, &c., &c.,' it seems likely that the British Museum mosaic also came from a baptistery. The word FONTES stands to recall the verse, or as there has been some disturbance there may have been the words SICUT AD FONTES.³ The group is found again in at least two well-known objects from Christian North Africa: a leaden vessel and a circular silver box. On these the kneeling stags and hinds kneel and drink exactly as on our mosaic. Another mosaic panel on the same staircase has two deer, with crosses suspended from their necks, drinking from a fountain.

¹ Some fragments of Byzantine date are in the Graeco-Roman Basement.

² It was found at Gamart, the ancient Neopolis.

³ In a catacomb painting of the Baptism of our Lord a stag appears in the foreground, again a reference to the same verse (Ps. xli). The great font basin of the Lateran Baptistery was filled by water which ran from the mouths of silver stags. Doubtless when it was full their noses touched the water and they seemed to drink.

Even the hunting scene appears to be Christian, for crosses are charged on the horses.

Metal, &c. There is a good collection of bronze objects, especially lamps and lamp-holders, in the Early Christian room. The largest of the polycandela, or pierced discs for holding glass lamps, is exactly like another in the Cairo Museum (see Strzygowski's catalogue).¹ Two others of which the provenance is known came from Sidon. From the very large collection of such things in the Cairo Museum we may suppose that our lamp-holder and many of these bronze objects originated at Alexandria.

The splendid silver casket of Projecta also probably comes from Alexandria, as has been said. The building represented on it, with several domes rising from a terrace, is distinctly Eastern; the nereids are of the kind found on Coptic ivories. The medallion heads of husband and wife are like those on the gold-glasses. I see no reason for saying *late* fourth century. No. 554, described as 'an embossed fragment; St. Luke: Angels supporting an imperfect medallion', is, I should say, part of a book-cover which had a medallion of our Lord in the middle supported by angels and the four Evangelists in the corners.

Probably the most remarkable object in this room is the small pottery bowl with the figure of Christ between Constantine and Fausta. From its likeness to Egyptian faience there can be little doubt, as has been pointed out, that it came from Christian Egypt. A sacred personage, between medallions of husband and wife, is the type of design frequently found on the gold-glasses. As these seem to have been made for family commemorations, I think we may suppose that our little bowl was made for Constantine himself. A peculiarity which it has is that the figure can hardly be seen unless the bowl is wetted, and it has been suggested that this has been brought about by its burial. Is it not probable that it always had the character of a magic cup? A fragment of an interesting gold-glass medallion may be restored by comparison with others. It shows the right-hand half of a screen from the beam of which hangs a lamp. In the middle would have stood a departed personage or saint in the attitude of prayer; within the screen is Paradise. The fine mosaics of St. George, Salonica, are elaborations of the same motive, and there is an ivory of St. Menas exactly like our glass medallion. Hardly any of the many rings are so important as one of a few at South Kensington, which after having been figured by Garrucci has, so far as I know, been nearly forgotten; this is engraved with a central tree with the Holy Lamb above, sheep below, and on either hand birds flying to shelter in its branches.

¹ I believe its purpose was first pointed out in Lethaby and Swainson's *Sancta Sophia*, 1894.

In the Early Saxon collection there is a chain bracelet with an attached cross, which may be compared with several Early Christian bracelets in Cabrol's big Dictionary of Christian Antiquities.

Among the Coptic and Arabic textiles in the upper Egyptian Gallery several are definitely Christian. At South Kensington there is a great collection of these, amongst them some with subjects drawn or painted on them in blue, to which Strzygowski has called attention in his *Orient oder Rom*. These are dated fifth or sixth century, but I should think they are more likely to be fourth judging from the style. A piece of the same kind has recently been added to the Louvre with a scene from the story of Dionysos, his name being written against him as on our pieces we find Maria, Moses, &c.

At South Kensington are some extremely interesting fragments of silk embroidery, probably of the sixth century. One fragment figures the Last Supper, the Apostles reclining at a C-shaped table; a serpent speaks in the ear of Judas. On some small pieces of rough tapestry are pretty jewelled crosses resembling those seen in mosaics. More and more it seems that the motives of Byzantine art came out of Egypt. Here at South Kensington are also many pierced leather shoes.

Ivories. I want to refer again to the early ivories on which I made a few remarks in this room two or three years ago.¹ Since that time Mr. Dalton's admirable catalogue has appeared. It has often been said that the beautiful fourth-century panel at South Kensington, which has resemblances to others of Early Christian style, must be adapted from an antique. I have recently found an illustration of a marble relief in the *Thermae Museum* at Rome, which is so like our ivory in details and feeling that I think it may be the actual source for the ivory. First of all it is very small, only about 10 in. \times 6½ in. The figure of a priestess at the altar faces the right, as in the companion to our ivory now in the *Musée de Cluny*; the chiton slips from her shoulder as in that, and the general fall of the drapery is similar; also the pose of the hand and the planting of the feet. The garlanded altar on the marble is like that on the ivory. The idea is the same and the whole composition is of the same class. (*Ausonia*, 1907.)

The splendid and much-discussed ivory of St. Michael at the British Museum I still feel is later than the fourth century, to which it is conjecturally assigned. It should be compared with the diptych of Probus, consul in 406, now at Aosta, which shows a similar general design and gesture.² Similar ornamentation around arches appears on Syrian buildings shown in Crosby

¹ *Proceedings*, xxii, p. 231.

² L. Von Sybel, *Christliche Antike*, part ii, 1909.

Butler's volumes. I could believe that it belonged to the fifth century, but not to the fourth.

At the British Museum the elaborate carved book-cover of the Psalter of Melisenda, daughter of Baldwin and wife of Fulke of Anjou, King of Jerusalem 1131-1144, on which is represented the strife of the Virtues and Vices, has been called Byzantine. It is illustrated in Bayet's *L'Art byzantin* as a mixed work. The Virtues and Vices are Western subjects, and I believe that the borders and ornaments are as Western as the figures, which are remarkably like those at Malmesbury, c. 1170. The ornamental border has an interlacing motive like the Bouchier knot. The same form is found in the border of the famous Jesse window at Chartres, c. 1150, and this type of border is found in various combinations in the windows of Le Mans and Angers, c. 1170. Further, the most beautiful set of Virtues and Vices known to me surrounds an arch at the Abbey of St. Aubin, Angers. They, too, belong to the same period and they are delicate as ivory carvings. One of the borders of the ivory has a Moorish or Arabic look, but curiously I have a note of the elaborate entrance to the chapter house at St. Aubin, Angers, that some of the ornamental carving looks strangely Arabic. The coincidence that the MS. which the ivories cover belonged to the wife of Fulke of Anjou is striking. I suggest that they were wrought at Angers, c. 1170. In any case and generally I would call them French Romanesque.

British Mosaics. In the Roman Corridor of the British Museum are several Romano-British mosaics; one from London has a flowery cross in a panel, another shows two peacocks drinking from a vase, and a mosaic on the wall of the north-east staircase has some small crosses set on it. A few years ago it was the fashion to rule out the Early Christian use of crosses altogether, so that anything of the kind on the British mosaics must have been accidental, but now it is known that the cross was in general use from the end of the third century.

The whole question of these British mosaics and the relation of many of them to Christianity needs to be reconsidered.

We may begin with the Frampton mosaic, which had the Chi Rho monogram set at the centre of a long panel of scroll ornament which formed the chord of an apse. Horsley, who was interested in these mosaics, speaks of the monogram as 'inserted'; but a consideration of the design of the scroll, which springs upwards and downwards alternately except for the central circle with the monogram, shows conclusively that all was designed at once and that the medallion was *not* 'inserted'. I am told that the subject in an old medallion may have been removed for the monogram and that it does look as if it had been meddled with.

But even so it would just as likely be old repair, or more likely modern restoration. A second pavement at Frampton was set out in panels, octagons, and crosses, a pattern found in Sta. Costanza, Rome, c. 360. One of several Orpheus pavements, that at Horkstow, Lincolnshire, is accepted as Christian by Romilly Allen and in Cabrol's dictionary, because of some small crosses which occur with four heads in the spandrels. An ornamental panel shows some doves pecking at grapes, a subject that is likely to be Christian.

On his drawing of an Orpheus pavement at Winterton, Lincolnshire, Fowler shows a small cross on the field occupied by one of the animals.

All these Orpheus pavements doubtless belong to the fourth century. An earlier pavement was recently found at Cirencester 2 feet below the first Orpheus mosaic and a coin of Allectus (after 293) was found in the rubbish between. My friend Mr. Powell, who has repaired this floor, tells me that Orpheus was accompanied by a fox and probably a peacock. I noted that the Phrygian cap of Orpheus is here studded with objects which are in fact crosses.

Eight or more British pavements have the Orpheus group, and it seems to me impossible that this should be so in the fourth century without its being at least an allusion to Christianity.

A remarkable example was that at Littlecote Park, where an Orpheus pavement was found in a little apartment with three apses curiously like the Early Christian burial chapels in Rome. This pavement also had a panel of two beasts drinking out of a vase, exactly like the well-known enamelled plate at the British Museum, which was found in London. Here are also the four Seasons, a common motive in the Catacombs, which also appear at Horkstow and at Bignor.

At Withington, Gloucestershire, a border to the Orpheus pavement had a cantharus and two drinking peacocks, like the piece in the British Museum. In the *Journal of the British Archaeological Association*, 1851, was described a mosaic at Harpole, Northampton. It was of plain panels with an octagon in the middle, which contained a cross consisting of eight rays of white, the *alternate* divisions being filled with red, making a well-defined cross. It is remarked that none of the Northamptonshire pavements have mythological scenes, 'from which it may be concluded that they are of later date, and from the cross it is evident it was laid down after Christianity became known.' The vases, which so frequently occur, in some cases may be chalices. At Frampton a panel in the apse contained a vase, and a mosaic at Canterbury has such a vase in the middle. These should be compared with the Carthage mosaic described above.

In the Early Christian church at Silchester there was a square of mosaic where the altar stood. It was divided quarterly and filled with chequer patterns. A similar pavement was discovered at Stourton, Lincolnshire; a fragment of this or yet another is now in the cloister of Lincoln Cathedral."¹

The PRESIDENT was indebted to the author for pointing out Early Christian elements in objects not exhibited in the corresponding room under his charge at the British Museum. That room could not accommodate all the smaller antiquities that should logically be shown there, and certainly could not give hospitality to sarcophagi and tessellated pavements, which were exhibited in another department. There was bound to be some overlapping in any large museum; for example, MSS. were very properly kept together, and therefore the Anglo-Saxon section could never be considered complete; the border-line between late classical and Early Christian antiquities was one of the most difficult to determine. Mr. Lethaby's counsels of perfection had, however, brought out some interesting facts that appeared to have been overlooked.

Thanks were ordered to be returned for these communications.

THURSDAY, 26th JANUARY, 1911.

CHARLES HERCULES READ, Esq., LL.D., President,
in the Chair.

The following gifts were announced, and thanks for the same ordered to be returned to the donors:

From A. C. Fryer, Esq., Ph.D., F.S.A.:—A collection of photographs of wooden monumental effigies.

From the Trustees of the British Museum:

1. Reproductions of prints in the British Museum, third series. Part IV. Specimens of etching by Flemish masters, 1520-1630. fol. London, 1910.
2. The sculptures of the Parthenon, with an introduction and commentary. By A. H. Smith. fol. London, 1910.

¹ The latter part of this communication was not read, owing to the lateness of the hour. Hence no opportunity arose for criticism of the statements contained in it. [Ed.]

On the nomination of the President the following were appointed Auditors of the Society's Accounts for the past year :

Philip William Poole Carlyon-Britton, Esq.
William Howard Aymer Vallance, Esq., M.A.
Edward Schroeder Prior, Esq., M.A.
Arthur Banks Skinner, Esq., B.A.

Laurie Asher Lawrence, Esq., F.R.C.S., was admitted a Fellow.

C. H. JENKINSON, Esq., B.A., read a paper on Exchequer Tallies, in which he drew especial attention to a hoard of thirteenth-century tallies discovered by the Office of Works during the recent repairs to the Chapel of the Pyx at Westminster. With these tallies were found remains of contemporary white leather bags of curious workmanship, and some important fragments of documents.

The object of the paper was principally to deal with the manner of cutting the tallies, but an important discovery had to be mentioned, namely, the change which came over the usage of tallies, by which they could be adopted for purposes of issue. In conception the tally was purely a receipt, but the practice grew up of paying creditors with a tally on the debtor, a receipt being made out to one person and given to another, who did not part with it until he had received the money. In this way the Government was saved the trouble of collecting its own debts. As a result the tally, still in form a receipt, became a cheque payable to bearer ; the registration of receipts at the Exchequer became frequently fictitious, or rather the double business of receipt and issue might often be simplified into a single process, and practically the whole business of the Exchequer be transacted without money passing at all. An early mention of the use of receipt tallies for purposes of issue is in 35 Edward I, and from about the year 1320 the practice became fully established, and it continued to be the chief method of issue until the end of the seventeenth century.

With regard to the cutting of the tallies, the description given in the *Dialogus* has always been a difficulty, owing to the fact that no really early examples have been available. In explanation it may be mentioned that the tallies were usually of hazel. They consisted of two parts, the stock and the foil, the Exchequer keeping the latter, but the stock was apparently returned when the accounts were finally made up. The description in the *Dialogus* applies throughout to the tally proper, the part given to the accountant. It is interesting to note that no provisions against fraud are mentioned : it was very rarely attempted.

Originally tallies had no indication of either date or of the locality concerned. These were added by an order of 19 Edward I, although earlier tallies, with the year written in, have been noticed before that date.

Finally, mention was made of the *pro* and *sol* development, the former being instruments of payment, the latter acknowledgements of receipt. There can be little doubt that some time near to the earliest date at which the entry *sol* appears in the Receipt Rolls (indicating that the money had actually been paid in) saw its first appearance on the tally. It was apparently written in the upper of the two notched edges. The *pro* note (being an entry of the name of the creditor in whose favour the tally was to be cashed) was written on the free side of the annotation. It is to be noted that the wording on the tally was identical with the entry in the Receipt Roll (or Book) throughout—from the thirteenth to the nineteenth century.

The use of tallies did not finally end till 1826.

Sir BENJAMIN STONE owned to a share in the discovery of the tallies in the Pyx Chapel, and had done a considerable amount of work on them since, though it remained unpublished. His persistent applications for admission at last overcame the scruples of Government officials, who could find no precedent for the admission of any one to that interesting storehouse, where the Crown Jewels, Domesday Book, and other articles of value used to be kept. In an old chest there he had found a quantity of tallies, mostly of the Jews' Exchequer, the name of Aaron of York occurring repeatedly. He had himself transcribed 900 tallies from this series, and, if he could not edit them himself, would arrange that the material should pass into suitable hands.

The TREASURER had written a paper¹ on the subject of tallies, and was glad to hear of other specimens. Martin's Bank, which claimed to be the oldest establishment of the kind in London, possessed about forty tallies (some of which were exhibited), and the documents relating to them. These were of varying dates from 1703 to 1707, and were found in an old box opened in 1901; they dealt with thirteen annuities, producing altogether £340 a year, and were bought between 1756 and 1759 by a Mr. Eustace, who paid about £7,000 for them, or an average of 20½ years' purchase. In late Stuart times it had been the custom of Government to borrow money for short periods on tallies, which served the purpose of Treasury bills or promissory notes, and had the advantage that they

¹ *Archæological Journal*, lix. 288.

could not be forged. But after the closing of the Exchequer by Charles II in 1672 and the suspension of payment by the Treasury, it had grown very difficult to raise money in this way. Hence long annuities came into fashion, secured on certain taxes, with a definite rate of interest. This was the character of the securities purchased by Mr. Eustace, the tallies for which were contained in the box at Martin's Bank. The annuities having lapsed they were left there and forgotten. Tally-sticks were still used in certain trades and industries, and their use in scoring gave rise to the expression 'notching a run' at cricket.

SIR ERNEST CLARKE exhibited one of the longest tallies known, measuring nearly 4 feet. It belonged to the Royal Statistical Society, was dated 1813, represented £25,000, and mentioned 39-40 George III, cap. 67. Specimens dated 1824 and even 1828 were known in the Record Office, and the system was only given up when cheques came into fashion.

MR. MABERLY PHILLIPS was the owner of the longest tally known, which was also exhibited. Cheques were the descendants of the tally, and were at first not perforated but torn off against a strip of tin with a wavy edge, which made an indenture. He had notes of small bundles of straw being used as tallies in Northumberland.

Prof. GOWLAND said there existed till recent times an elaborate system of tallies in the Lu-Chu Islands, not marked with notches but with incised lines and arbitrary symbols. An exhaustive paper on the subject by Mr. Basil Hall Chamberlain appeared in the *Journal of the Anthropological Institute*, vol. XXVII, p. 303.

MR. JENKINSON in reply stated that the issue tallies were the first to be discontinued, the receipt tallies being in use till 1826, the year in which died the last of the two chamberlains referred to in the order of 1783. The tally of 1815 belonging to the Statistical Society mentioned Catherine Puget and Thos. Bainbridge, and the Act of Union referred to was the union with Ireland in 1801. All indented deeds were derived from the practice of tally cutting.

The PRESIDENT said the longer tallies were common enough twenty to thirty years ago, and he had seen numbers of them in dealers' shops. Sir Wollaston Franks had collected a number of specimens, and the British Museum possessed a few of some

interest. It was still the practice on French railways to tear off a check for luggage against a piece of tin with a wavy edge.

Mr. Jenkinson's paper will be printed in *Archaeologia*.

Sir J. C. ROBINSON, Knt., C.B., F.S.A., exhibited a silver brooch which he considered to be of the tenth century and two Scottish Highland brooches.

The PRESIDENT referred to the lack of evidence as to the provenance of one of the exhibits, and its appearance only strengthened his suspicions that it was not what it purported to be, a nielloed brooch of the later Anglo-Saxon period. He had seen the specimen on a previous occasion, but had had no opportunity of examining it carefully in a good light. There must always be an element of doubt about an object 1,000 years old, and he did not wish to appear dogmatic.

Dr. EVANS did not share the President's opinion, and regarded the brooch as a contemporary of the fine sword-hilt found at Wallingford¹ and now in the Ashmolean Museum. The two objects might well be by the same hand, and he could not understand how any one could in modern times reproduce so exactly the design and feeling of undoubted antiquities and MSS. of the late Saxon period.

Mr. REGINALD SMITH had only made a cursory examination of the brooch, but was inclined to agree with the President. It was unfortunate that the front had been so thoroughly cleaned, a process that might render any antiquity suspicious. Certain features of the design, such as the rosettes in the border, were hardly in keeping with Saxon art of the early tenth century, and the arrangement of the back did not inspire confidence.

W. DALE, Esq., F.S.A., exhibited slides of the Tudor House and of the Norman house known as King John's Palace at Southampton, which are now being offered for sale.

The TREASURER moved the following resolution:

"The Society of Antiquaries of London, having heard that the property in Southampton, known as the Tudor House and King John's Palace, is now being offered for sale, would express the hope that steps may be taken by the Mayor and Corporation to save these buildings from destruction. They

¹ *Archaeologia*, l. 534, pl. xxvii.

would especially urge that the remains of the almost unique Norman house, which abuts on to the arcaded portion of the Town Wall, should be preserved, and that something should be done to protect those parts that are exposed to the weather from further injury."

This was seconded by Sir Benjamin Stone, and carried unanimously.

Prince FREDERICK DULEEF SINGH, M.V.O., F.S.A., exhibited an alabaster figure of Charity, found in a ditch near Diss, Norfolk. The figure dates from c. 1600 and is doubtless of English workmanship, but differs from the representations of Charity commonly found on monuments of this period in being nude instead of draped. The figure is headless and somewhat weather-worn, but of good style for the time; it holds a child, and another stands by its side.

Thanks were ordered to be returned for these communications and exhibitions.

THURSDAY, 2nd FEBRUARY, 1911.

CHARLES HERCULES READ, Esq., LL.D., President,
in the Chair.

The following gifts were announced, and thanks for the same ordered to be returned to the donors:

From A. E. Henderson, Esq., F.S.A.:—London County Council publications, viz. (1) *Ship of the Roman period discovered on the site of the new County Hall*. 8vo. London, 1910; and (2) *Tyburn Gallows*. 8vo. London, 1909.

From W. W. Richardson, Esq.:

1. Collections (mainly excerpts from *The Builder*) relating to the cathedrals of England, Scotland, Wales, and Ireland, with photographic illustrations.
2. Manuscript list of sepulchral effigies in England and Wales.

The following were admitted Fellows:

Frederick John Morton Palmer, Esq., M.B.
Rev. Arthur John Beanlands, M.A.

CHARLES PFLOULKES, Esq., M.A., read a paper on Italian Armour from Chalcis in the Ethnological Museum at Athens.

This collection of armour of the fourteenth and fifteenth centuries was discovered during some alterations to the Castle of

Chalcis in Euboea in 1840. It has never been carefully examined or labelled, and it is only recently that Mr. Ramsay Traquair, acting on behalf of the Byzantine Exploration Fund, has photographed and made notes upon the most important pieces. There are some sixty helmets of various types, the most important of which are three great bascinets and a large variety of salades. There is a great deal of body-armour in a more or less dilapidated condition, amongst which some breastplates worn with the brigandine are worthy of notice, particularly so because they bear armourers' stamps, one of which suggests Milanese origin.

There has been no attempt at restoration, and portions of lining, straps, and coverings are still *in situ*. The Castle of Chalcis was taken from the Venetians by the Turks in 1470, and the specimens exhibited range from the latter part of the fourteenth century to this date.

LORD DILLON saw a resemblance between the Chalcis armour and that found at Tannenburg, a castle burnt in 1399, which gave a limiting date for the pieces found there. Some of the helmets shown would, apart from information, be assigned to a later period than the fourteenth century. The back view of one, for instance, was almost identical with a helmet of Henry VIII made by order of the Emperor Maximilian and delivered in London in 1514. This indicated a remarkable persistence of type, and there was another specimen in Paris. The question of ear-pieces was of interest, as even with a much lighter covering it was difficult to hear anything going on outside. It would have been a great advantage to have the metal cut away at the ears, and discs were sometimes added at these points. The method of fastening a disc at the back was often seen, as in the picture of the battle of St. Egidio in the National Gallery: a blow from behind would be parried by the disc. Another peculiarity was the great height of some of the Chalcis series, implying a long neck, but even then the movement of the head would be crippled. It should be noticed that the lower edge was turned outward so as not to cut the shoulder. A padded cap was worn underneath the salade in order to keep the front off the head, and was to be seen in portraits: it did not fit like a 'sou'-wester'. Chain-mail rusted very easily, and little more was likely to be found.

THE PRESIDENT said that the whole story of the find was most romantic; and the fact that the armour had been sealed up since 1470 was of the highest importance. One could easily imagine that later helmets had been carelessly added to the group discovered, without impugning the authenticity of the majority.

He was inclined to believe that most of the pieces were strictly contemporary, and constituted a 'hoard' in the archaeological sense.

Mr. Foulkes's paper will be printed in *Archaeologia*.

O. M. DALTON, Esq., M.A., F.S.A., read a paper on mediaeval personal ornaments from Chalcis in the British and Ashmolean Museums, which will be printed in *Archaeologia*.

MR. DALTON also read the following paper on mediaeval rings with representations of the Five Wounds of Our Lord :

"Rings with this subject appear to have once formed a rather numerous class, though surviving examples are now exceedingly rare. Some seem to have served as mourning or memorial rings,

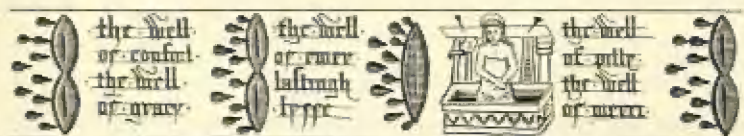


Fig. 1. DEVELOPMENT OF THE COVENTRY RING IN THE BRITISH MUSEUM.
Cf. Plate, fig. 3, right.

for the will of Sir John Shaw or Shaa, Alderman of London, dated A. D. 1487,¹ directs that rings of fine gold 'graven with the well of Pitie, the well of Mercie and the well of Everlasting Life' are to be given to sixteen of his friends. The wounds are here, as always, symbolically described as wells; and though two, those of Grace and Comfort, are in this case unspecified, their occurrence on the rings actually made may safely be assumed. But if the commemorative employment of rings with the Five Wounds thus appears to be attested for the close of the fifteenth century, this was probably a subsidiary use; in their origin they must have been devotional. They are to be regarded as typical, if inconspicuous, representatives of a definite phase of thought and feeling, and belong to that closing period of the middle ages when the love of the pathetic and the emotional had displaced the earlier attachment to ideal forms. I am at present acquainted with only two of these rings, both in the British Museum. The most interesting example is known, from the place of its discovery in 1802, as the Coventry ring,² and bears, in addition to the wounds,

¹ *Notes and Queries*, 1863, pp. 323, 416, 460, 516; 1903, p. 308.

² *Archaeologia*, xviii, p. 306; *Gentleman's Magazine*, 1803, p. 497. The ring was unearthed in Coventry Park near the town wall by a person digging potatoes.

the subject known as the Christ of Pity (figs. 1 and 3). It is a broad and massive band of gold, weighing 786 grains, engraved on the outer side as shown in fig. 1,¹ and having on the inner side the inscription in black letter:

+ Wulnera quinq' dei sunt medicina mei pia
+ Crux et passio Xpi sunt medicina michi jasper
+ Melchior baltasar ananyzapta tetragrammaton.

The curious disposition of the lines is worthy of remark: the natural divisions would fall after the word *mei* in the first line, and *michi* in the second.

The second ring in the Museum collection is also a flat band of gold, but less massive, weighing 136 grains (figs. 2 and 3). On the exterior it has the wounds, the Trinity, the Virgin and Child, and St. John the Baptist; in the interior is the same inscription

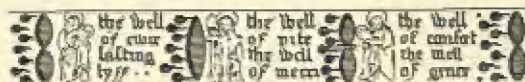


Fig. 2. DEVELOPMENT OF A GOLD RING WITH THE FIVE WOUNDS IN THE BRITISH MUSEUM. Cf. Plate, fig. 3, left.

as that of the Coventry example, but with the lines arranged in a more regular manner. The interpolated figures in this example show that subjects connected with the Passion do not invariably accompany the wounds.

A third ring, apparently of the same class, was described in *Notes and Queries*, 1872, by Mr. John Piggot, F.S.A., as having been found in Surrey. It bore on the outside the wounds, the Passion, and crosses in white enamel.² Other rings on which the wounds appear differ in so far as these are not represented alone, but with the hands, feet, and heart of Our Lord (cf. below, p. 343). With such rings the present notes are not immediately concerned.

We may dismiss in a few words the inscriptions engraved within the rings of the Coventry type. The two first lines explain themselves. In the third we have the names of the Three Kings and two magic terms. The names of the kings were throughout the middle ages 'names of power' supposed to exert a saving influence upon the health and fortune of those who used them, and above all to preserve from the falling sickness; they are found upon innumerable mediaeval objects,

¹ Probably once enamelled, though all traces of enamel are now lost.

² *Notes and Queries*, 1872, p. 330. The inscriptions are almost identical with those of the other two rings.

especially those made for personal wear, and notably on rings and brooches.¹ The word *Ananizapta* was also good for falling sickness, and is of very frequent occurrence.² *Tetragrammaton* is familiar to all acquainted with the terminology of magic, as one of the names of God.

It was in the fourteenth century that the cult of the Five Wounds became general. Prayers addressed to them appear in the Books of Hours of the period, and the succeeding century witnessed the establishment of Confraternities of the wounds, which were now so generally venerated that money was left in wills for the provision of masses in their honour.³ Art followed in the steps of piety and was quick to illustrate the subjects of such general devotion. The wounds, especially the great wound of the side, appear in illuminated MSS. of the fourteenth century; even the dimensions of this great wound are given, calculated from the breadth of the Holy Lance.⁴ Just as a pious fancy had devised a shield of arms for the instruments of the Passion, so in the fifteenth century we find the wounds blazoned on a shield, as in the fragment of stained glass here illustrated (fig. 4), all that remains of the old chancel window in Sidmouth Church.⁵ Here, as on the ring, the several wounds are described as wells, the wells of mercy, wisdom, grace, godly comfort, and everlasting life, the last phrase referring to the larger wound, which was the object of a peculiar veneration. The substitution of *wisdom* for the more usual *pity* should be here remarked. The wounds on this window are not lenticular with issuing drops of blood as is commonly the case, but appear as long triangular forms of crimson, each surmounted by a golden crown. The large wound, *the wel of everlasting lif*, is in the centre: *the wel of wisdom* and *the wel of mercy* are above: *the wel of grace* and *the wel of godly comfort* below. Many similar examples must once have existed:⁶

¹ Cf. Canon Sparrow Simpson's article mentioned below, pp. 370, 371; see also *Arch. Journ.* xxvi, p. 233. The kings occur with *Vulnera quinque Dei*, &c., in the Stockholm Magical MS., but as a charm against fever (*Archæologia*, xxx, p. 400).

² For *Ananizapta* see *Archæologia*, xxx, p. 427; *Journ. Brit. Arch. Assoc.*, xl, p. 311; *Arch. Journ.* iii. 358; xxvi. 230.

³ For the above facts, see E. Mâle, *L'art religieux de la fin du Moyen Âge*, pp. 100-2.

⁴ See the paper by Canon Sparrow Simpson entitled 'On the measure of the wound in the side of the Redeemer', in *Journal of the British Arch. Association*, xxx. 357 sqq., where the *De quinque Vulneribus Jesu Christi* of Quaresmius is quoted. Representations of the great wound were worn as charms. The wounds appear not only in MSS. but in larger works of art of various kinds, such as monumental brasses and sculpture in wood and stone.

⁵ This shield, now in the window of the vestry, measures 8 in. × 7½ in. It was photographed for me by Mr. A. W. Ellis, by kind permission of the Vicar, the Rev. H. G. Clements.

⁶ The example from Quarrendon (now destroyed), to which Lord Dillon

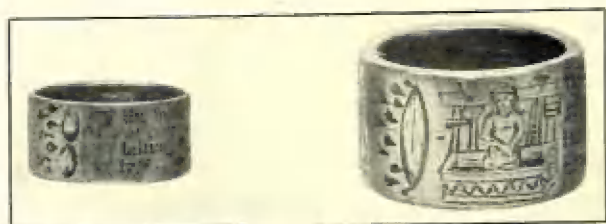


Fig. 3. THE COVENTRY RING AND SMALLER RING, WITH THE FIVE WOUNDS: BOTH IN THE BRITISH MUSEUM ($\frac{1}{2}$).



Fig. 4. SHIELD WITH THE FIVE WOUNDS. STAINED GLASS IN SIDMOUTH CHURCH, DEVON.



it is possible that others are actually preserved. In any case it will be of service to place the Sidmouth shield on record by a photographic illustration.

It is well known that the Five Wounds were the badge of those who followed the Pilgrimage of Grace in A. D. 1536, and it would be interesting if a direct connexion could be established between the devices of the rings, or the Sidmouth window, and that historical event. But one at least of the badges actually worn during the Pilgrimage is still preserved,¹ and the details are not the same: in the centre of the shield is the Sacred Heart above a chalice, while the pierced hands and feet are disposed on either side. This may be a rather later type than that of the Coventry ring, and that of the window in Sidmouth Church. It has affinities with those representations in which the hands and feet themselves occur in association with the instruments of the Passion, as on the Quarrendon window and the rings already mentioned (p. 341), which are presumably of the early sixteenth century.²

A point of some interest, which may not inappropriately be mentioned here, has recently been raised in connexion with one of the subjects shown upon the Coventry ring: the figure of Our Lord in the tomb, described as the Christ of Pity. This figure, standing with crossed hands on which the wounds appear, is a mystical type, unknown to the earlier middle ages and alien to their sentiment. Adopted in Italy in the fourteenth century, it crossed the Alps before the year A. D. 1400, and in the fifteenth century was universally popular. Accessories, notably the instruments of the Passion, as on the Coventry ring, were added to the earlier conception, which was destined to develop still further in the direction of an elaborated symbolism.³ By the time of the early *incunabula*, the type had been incorporated in a more comprehensive subject, the Mass of St. Gregory, in which the Pope is seen with representatives of the religious and secular worlds on his right hand and his left, while the vision of the Christ of Pity appears above the altar. It has been shown that

draws attention (p. 344), was upon a quarterly shield, drawn in the MS. to which he refers. Here, however, the wounded hands and feet appear, and not the wounds alone.

¹ It belongs to the Duchess of Norfolk, and is described, with a half-tone block, in the *Journal of the Yorkshire Archaeological Society*, vol. xxi, pp. 108-9. I am indebted for this reference to Mr. Mill Stephenson.

² One, from the site of Tichfield Abbey, Hants, is now, as the Rev. G. W. Minns informs me, in private possession. Another is in the collection of Sir. Arthur Evans.

³ The introduction of the Virgin and St. John, or of angels, to support the body of Christ is perhaps Italian, as also may be the representation of the body within a tomb or sarcophagus. The greatest presentation of the type so conceived is found in the pictures of Giovanni Bellini in the Brera, at Rimini, at Berlin, and in the Mond Collection in London.

an engraving by Israel van Mecheln, a contemporary of Dürer, reproduces the Christ of Pity from an ancient painting, now lost, but formerly preserved in the Church of Sta Croce in Gerusalemme at Rome.¹ From the occurrence of a Greek inscription at the top, it would seem that this picture was brought from the East, and may have been painted by a Greek artist as early as the thirteenth century. However this may be, Roman tradition decided that the work had been actually executed by order of St. Gregory to represent the famous vision seen by him while celebrating Mass. It thus attained a great celebrity, and was freely copied both in painting and sculpture: it is in all probability the source from which the innumerable Pities of the later middle ages descend. Its popularity did not depend upon tradition alone; that would hardly explain the extremely wide diffusion of the type. A second cause enhanced its reputation: important indulgences were at an early date granted to all who offered certain prayers before it. In the fifteenth century the period of indulgence was vastly augmented, and it is this fact which explains the frequency of this subject in monumental and minor art.

It would be interesting to learn if other rings of the Coventry type have survived and where they are now preserved. Doubtless many were melted down; some perhaps are awaiting discovery in the earth. Out of the numbers which must once have existed, there should still be a residue which the publication of these notes may help to bring to light."

LORD DILLON remarked that Sir Thomas More asked for five loaves in honour of the Five Wounds, and in 1597 Sir Henry Lee, K.G., rebuilt the chapel of Quarrendon, Bucks., and inserted stained glass windows with the wounds, the instruments of the Passion, the thirty pieces of silver, and coats of arms [*Lansdowne MS.* 874, fol. 72 (36)].

THE PRESIDENT, referring to Mr. Dalton's first paper, said that he had been familiar with the Chalcis jewellery for many years, but had failed to find room for its exhibition at the British Museum. He thought the 'base metal' referred to was really silver, with a copper alloy to account for the oxide which would appear after burial for so many centuries.

Thanks were ordered to be returned for these communications.

¹ *L'art religieux de la fin du Moyen Âge en France*, 91 ff. Examples of the engraving are at Paris, Berlin, and Vienna: there is no copy in our own public collections.

THURSDAY, 9th FEBRUARY, 1911.

CHARLES HERCULES READ, Esq., LL.D., President,
in the Chair.

The Rev. Charles Swynnerton was admitted a Fellow.

E. NEIL BAYNES, Esq., F.S.A., in presenting his Report as Local Secretary for North Wales, gave some description of the megalithic remains of the Island of Anglesey, and exhibited some worked flints, pottery fragments, and other objects found under Lligwy Cromlech.

The monuments consist of dolmens, or cromlechau as they are termed in North Wales, *meini hirion*, and a single instance of a chambered or cisted mound in the park adjoining Plas Newydd, in the parish of Llanddaniel.

Fifty-four dolmens have been traced, of which some survive at the present day, either nearly intact or in an advanced or partial condition of decay; many others have been destroyed, and though in some cases particulars are to be obtained concerning them, in other instances only the barest references are to be found.

Fourteen examples fall under the latter heading, viz.:

¹ One at Plas Feilw, $1\frac{1}{2}$ m. S.W. by W. of Holyhead Church.

" " Bodlew, $1\frac{1}{4}$ m. S.W. of Llanddaniel Church.

" " Rhos y Cerrig, 1 m. S.S.W. of Llanddaniel Church.

" " Tyddyn Caesar, $\frac{1}{2}$ m. N. by W. of Llanedwen Church.

" " some spot in the parish of Llanfaelog.

" " Cae'r Llechau, $\frac{3}{4}$ m. S.E. by S. of Llangeinwen Church.

" " Barras, $1\frac{1}{2}$ m. S.W. by S. of Llanidan (new) Church.

" " Gwydryn, $\frac{1}{4}$ m. N.E. " " "

" " Llyslew, $1\frac{1}{4}$ m. N.W. " " "

" " Myfyrian, 2 m. N.N.W. " " "

Three on the Crigyll River in the parish of Llechylched(?).

One at Fedw, over $\frac{1}{2}$ m. N. by W. of Penrhoslligwy Church.

Of those dolmens concerning which some particulars are extant there are thirteen examples to be cited:

One $\frac{1}{2}$ m. E.S.E. of Holyhead Church.

No stones remain.

One not far S. from Llanallgo Church.

The exact site is unknown but a sketch remains.

¹ The approximate distances have been calculated on the 1 in. O.S. of 1905, from the church of the parish in which either the monument or its reputed site is to be found.

One at Treban, $1\frac{1}{2}$ m. N.N.W. of Llanbeulan Church.
Demolished about 1870.

One at Llech Talmon, $1\frac{1}{4}$ m. N.W. of Llanddyfnan Church.
All traces have apparently vanished.

One at Ty Newydd, $\frac{3}{4}$ m. N.E. of Llanfaelog Church.
Of this dolmen no trace remains.

One on Bodafon Mountain, over $\frac{1}{2}$ m. N.N.E. of Llanfihangel tre'rbeirdd Church.
Demolished about 1870.

One at Lon Caerau Mawr, $1\frac{3}{4}$ m. E.S.E. of Llangeinwen Church.

One at Tan Twr, 1 m. S.E. of Llangeinwen Church.

In neither of the above cases do any stones of importance remain.

Two at Carreg y Fran, $\frac{1}{4}$ m. N.W. of Llanidan (new) Church.
No trace of them remains.

One at Cae'r Nant, $\frac{1}{2}$ m. W.N.W. of Llanidan (new) Church.
Except for some stones set in a bank no trace remains.

One near Trefor, W. of Llansadwrn Church?

It has been described, but its site is unrecorded.

One at Gwaenfynydd, $\frac{1}{4}$ m. S.S.E. of the site of Llechylched Church.

The last group includes twenty-seven monuments which are still in existence, viz.:

One at Dindryfal, $3\frac{1}{4}$ m. N.E. by E. of Aberffraw Church.

A few stones remain of what may once have been a long chamber.

Two at Presaddfed, over $\frac{3}{4}$ m. E.N.E. of Bodedern Church.

One dolmen is standing, but the capstone of the other is resting against its supporters, with one end on the ground.

Three? at Trefignath, over $1\frac{1}{2}$ m. S.E. of Holyhead Church.

These may have formed one long chamber of the 'giant's grave' type.

One at Trearddur, $1\frac{1}{2}$ m. S.E. by S. of Holyhead Church.

One supporter is standing and another lies on the ground.

One at Boddeiniol, $\frac{3}{4}$ m. S.W. of Llanbabo Church.

Two or even three dolmens are said to have stood here, but the remains of only one can be found.

One at Bryn Celli Ddu, $\frac{3}{4}$ m. E.S.E. of Llanddaniel Church.

A fine monument with its *allée couverte* almost intact.

One at Cremlyn, 2 m. S. by W. of Llanddona Church.

Nearly all the stones have been removed to form a wall.

One at Glyn, 2 m. N.N.E. of Llanddyfnan Church.

The low capstone rests on one supporter and a few built-up stones.

One called 'Maen Chwyf', $\frac{3}{4}$ m. W.N.W. of Llandyfrydog Church.

Said to have been a rocking stone. No supporters can now be seen.

Two at Plas Newydd, 1 m. N. of Llanedwen Church.

Both monuments are standing and their capstones must at some time have been in contact.

One at Ty Newydd, $\frac{3}{4}$ m. N.E. of Llanfaelog Church.

A second dolmen is said to have existed here and been demolished.

One at Pentretraeth, $\frac{3}{4}$ m. N.N.W. of Llanfaelog Church.

A collection of flat stones on low marshy ground.

One at Mynydd Cnw, $1\frac{1}{2}$ m. S.S.W. of Llanfaelog Church.

Although called a cromlech this probably represents a collection of cists.

One at Pant y Saer, $\frac{1}{2}$ m. S.E. by S. of Llanfairmathafarneithaf Church.

Has been excavated; one end of the capstone rests on the ground. There is a cist within the dolmen.

One at Ty Mawr, over $\frac{1}{2}$ m. N. by E. of Llanfairpwll Church.

The capstone has fallen amongst its supporters.

One at 'Cromlech', $\frac{3}{4}$ m. N.W. by W. of Llanfechell Church.

A few disordered blocks of stone remain.

One at Henblas, $1\frac{3}{4}$ m. S.W. by W. of Llangristiolus Church.

Two gigantic supporters remain; the third has been removed.

One at Bodowyr, $1\frac{1}{2}$ m. W. by N. of Llanidan (new) Church.

A pretty dolmen with a mushroom-shaped capstone.

One at Perthi Duon, $\frac{3}{4}$ m. S.W. by W. of Llanidan (new) Church.

The capstone has fallen on one or two of its supporters.

Two at Trefor, 1 m. N.N.W. of Llansadwrn Church.

Both have been thrown down, but one supporter remains upright.

One at Lligwy, $1\frac{1}{2}$ m. E. of Penrhoslligwy Church.

This dolmen is in good preservation and has been excavated.

One at 'Cromlech', $\frac{1}{2}$ m. N.W. by N. of Rhoscolyn Church.

Only the capstone remains.

A chambered or cisted mound at Plas Newydd is $\frac{1}{2}$ m. N. of Llanedwen Church. It was opened many years ago, when

a massive cist was disclosed. At its entrance is a curious stone with two semicircular depressions in its upper edge.

Of the *meini hirion* thirty-nine examples are known to have existed, and there must have been many more that have been destroyed.

The following list comprises those concerning which it has been possible to find some record :

One at Bodhynod, over 2 m. W.N.W. of Amlwch Church.

Destroyed shortly before 1841.

One at 'Meinir', $\frac{1}{2}$ m. S. of Ceidio Church.

This farm almost certainly marks the site of a stone which formerly stood there.

One near the town, $\frac{1}{2}$ m. S. by E. of Holyhead Church.

The site is now covered with buildings.

One at Hafodty, $1\frac{1}{4}$ m. S.S.W. of Llanddona Church.

Standing in 1841, but no trace remains.

One at Cremllyn, $2\frac{1}{2}$ m. S. by W. of Llanddona Church.

Destroyed not many years ago.

One at 'Meinir', $\frac{1}{2}$ m. E. by N. of Llanfairmathafarneithaf Church.

It is almost certain that a stone once stood here.

One near Fron, $\frac{3}{4}$ m. W.S.W. of Llangoed Church.

No trace of it can be found.

One at Llyslew, $1\frac{1}{2}$ m. N.W. of Llanidan (new) Church.

Described in 1723 as a pillar of great length. No trace remains.

Two at Bryn Gwyn, over $1\frac{1}{2}$ m. W. by S. of Llanidan (new) Church.

Destroyed since 1723.

One at Pen-yr-Orsedd, 2 m. S.S.E. of Llanrhwydrys Church.

It vanished before 1841.

One $\frac{1}{2}$ m. N. by E. of Llechynfarwydd Church.

Broken up before 1854 for building purposes.

One called 'Maen Eryr', $1\frac{1}{4}$ m. E.N.E. of Tregayan Church.

Destroyed since 1841.

The following stones are still standing :

One at Dindryfal, $3\frac{1}{4}$ m. N.E. by E. of Aberffraw Church.

It is 12 ft. 6 in. in length, and stands 10 ft. 6 in. above ground.

One at Werthyr, over $1\frac{3}{4}$ m. W. of Amlwch Church.

9 ft. 6 in. in height, and said to have formed one upright of a trilithon.

Two at Penrhos Feilw, $1\frac{1}{2}$ m. S.W. of Holyhead Church.

These stones are 10 ft. high and about 11 ft. apart.

One at Ty Mawr, $1\frac{1}{4}$ m. S.E. by S. of Holyhead Church.

8 ft. in height and apparently associated with the dolmen at Trefignath.

One at Tafarn-Hwyaid, $\frac{1}{2}$ m. S.E. of Bodewryd Church.

A fine stone, 13 ft. high and 14-15 ft. in circumference.

One at Glan Alaw, 1 m. S.W. of Llanbabo Church.

An unrecorded stone 8 ft. 6 in. high and 6 ft. 7 in. wide.

Two at Cremlyn, 2 m. S. by W. of Llanddona Church.

9 ft. 6 in. and 7 ft. 7 in. high respectively, and 185 yards apart.

One at Cyndal, over $\frac{1}{2}$ m. S.W. by S. of Llanddona Church.

Only 5 ft. in height, but a portion has been broken off.

One close to Llanddyfnan Church, on its S.W. side.

About 8 ft. in height and 2 ft. square; it leans considerably to the N.W.

One at Cadnant, $\frac{3}{4}$ m. W.S.W. of Llandegfan Church.

A pointed stone 9 ft. 7 in. high, standing on the top of a hill.

One near Capel Soar, $\frac{3}{4}$ m. S.E. of Llanfaethlu Church.

A prominent object 9 ft. 3 in. in height and 6 ft. 3 in. in width.

Three not far from 'Cromlech', $\frac{1}{2}$ m. N.W. of Llanfechell Church.

They are from 6 to 7 ft. in height and stand almost in an equilateral triangle, about 11 ft. apart.

One flat stone, $\frac{1}{2}$ m. N. of Llanfechell Church.

8 ft. 6 in. in height and the only N. and S. maenhir in the Island.

One at Maen Addwyn, $\frac{1}{2}$ m. S. by E. of Llanfihangel tre'rbeirdd Church.

It stands in a bank by the roadside and is 10 ft. in height.

One at Bryn Golman, $\frac{3}{4}$ m. W.S.W. of Llanfihangel tre'rbeirdd Church.

A rough quartzite pillar 8 ft. 6 in. in height.

Two at Bryn Gwyn, over $1\frac{1}{2}$ m. W. by S. of Llanidan (new) Church.

Very fine stones, one 13 ft. and the other 10 ft. in height.

Two at Pen-yr-Orsedd, 2 m. S.S.E. of Llanrhwydrys Church.

They formed, with a third stone now destroyed (*vide supra*), a triangle and stood from 300 to 400 yards apart.

One called 'Maen-y-Gored', $\frac{3}{4}$ m. S.W. by S. of Llantrisant Church.

This stone has almost fallen on to what may be a second maen hir. The leaning stone is 8 ft. 6 in. above the ground.

One at Tyddyn Bach, $\frac{1}{4}$ m. S. of Trefdraeth Church.

A squarish stone, 8 ft. 6 in. in height, standing close to the railway embankment.

With regard to what has been done in the past year in order to ensure the future safety of the monuments of Anglesey, Major Fox Pitt has recently placed under the protection of the Commissioners appointed under the Ancient Monuments Protection Act, 1882, the two dolmens at Presaddfed.

Lord Sheffield has also transferred to the custody of the same Commissioners—

1. The dolmens at Trefignath.
2. The dolmen at Dindryfal.
3. The maen hir at Dindryfal.
4. The two meini hirion at Penrhos Feilw.
5. The maen hir at Ty Mawr.
6. The maen hir, 'Maen-y-Gored,' at Llantrisant, and
7. The 'cyttiau gwyddelod', or hut circles, on Holyhead Mountain.

Lord Boston has secured similar protection for—

1. The dolmen at Lligwy, and
2. The dolmen at Bodowyr.

The custody of some of the remaining monuments is now under consideration, although nothing further can be stated on this matter at present.¹

Mr. Baynes then pointed out that although the chambered mound and the dolmens at Plas Newydd had been scheduled under the Ancient Monuments Protection Act, 1882, as being worthy of preservation, their custody had not yet been handed over to the Commissioners. He further stated that damage might be caused to the fine dolmen at Bryn Celli ddu by the roots of trees growing among the stones, also that the enclosing wall is so close to the monument that the observer can obtain no satisfactory view of the dolmen.

Reference was also made to Beaumaris Castle, which, erected by Edward I in 1296, remained Government property until early in the nineteenth century. It is now in a picturesque condition of partial decay, owing principally to the ivy which covers its walls.

¹ Full particulars of the megalithic monuments of Anglesey will appear in the *Journal of the Hon. Society of Cymmrodorion*.

Mr. PALEY BAILDON said that Beaumaris was a fine specimen of military architecture, being the latest and best of the concentric castles. It was defaced by Edward I, and much mischief had since been done by ivy, but a small expenditure would preserve what still remained of the structure.

Mr. REGINALD SMITH remarked on Mr. Baynes's generous interpretation of his duties as Local Secretary, and the energetic steps he had already taken to preserve the records of ancient monuments in Anglesey. The maps he had prepared were models of their kind, and most instructive. In prehistoric nomenclature it was advisable to fall into line with continental writers, and, whatever the true derivation of 'dolmen' and 'cromlech', to use those words in the sense generally recognized abroad as well as in England. There was a well-defined type of megalithic structure that was fitly described as a table-stone (dolmen); and even if 'cromlech' could be used in the same sense, it was not desirable to have two terms for the same thing, especially as one derivation would authorize the application of cromlech to stone-circles, as in Brittany. If analogy was of any value, the cist shown within the dolmen would be the later of the two, the sequence being established at least in Scandinavia, where dolmens and cists were separated in time by the passage-grave, evidently a development of the dolmen proper. The finds exhibited were not necessarily of the same date as the primary burials, as megalithic tombs were opened from time to time for burials, and some were evidently entered even as late as the Roman period.

The PRESIDENT said the author had evidently bestowed great pains on the antiquities of Anglesey. The discussion of terminology was endless, and the most practical course was to adopt the terms most widely accepted for our own more restricted area, whether those terms could be scientifically defended or not. The resolutions proposed seemed to him eminently reasonable, and would no doubt be carried in the interests of our ancient monuments.

The following Resolutions were then moved by the PRESIDENT, seconded by the SECRETARY, and carried unanimously:

"(i) The Society of Antiquaries of London, having heard with regret that the ruins of Beaumaris Castle are in a dangerous condition through neglect and the growth of ivy, desires to suggest to Sir Richard Williams Bulkeley the urgent need of prompt action which may ensure the effective preservation of this historic building.

(ii) The Society of Antiquaries of London, having received a report on the condition of the cromlech at Bryn Celli ddu and Plas Newydd and the chambered mound at Plas Newydd, begs to

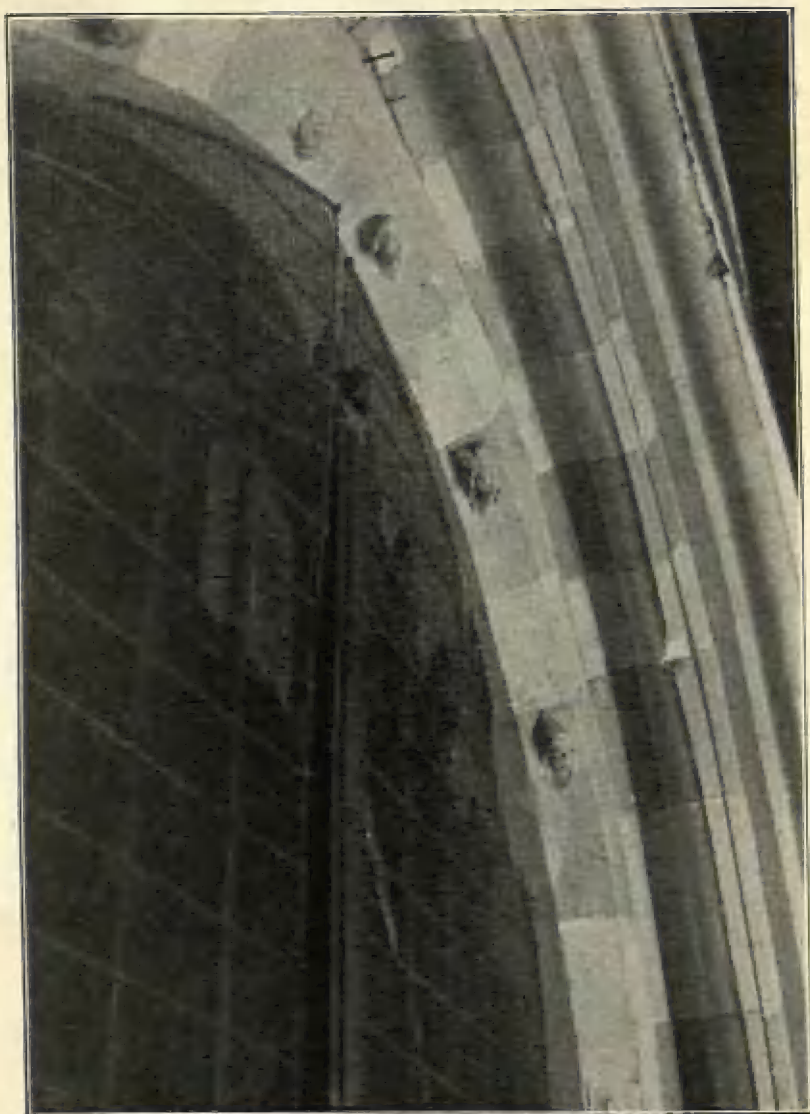


Fig. 1. WOTTON CHURCH : SOUTH DOORWAY : EAST SIDE.

invite the attention of the Marquess of Anglesey to the desirability of placing these most valuable and interesting prehistoric remains under the protection of the Ancient Monuments Acts."

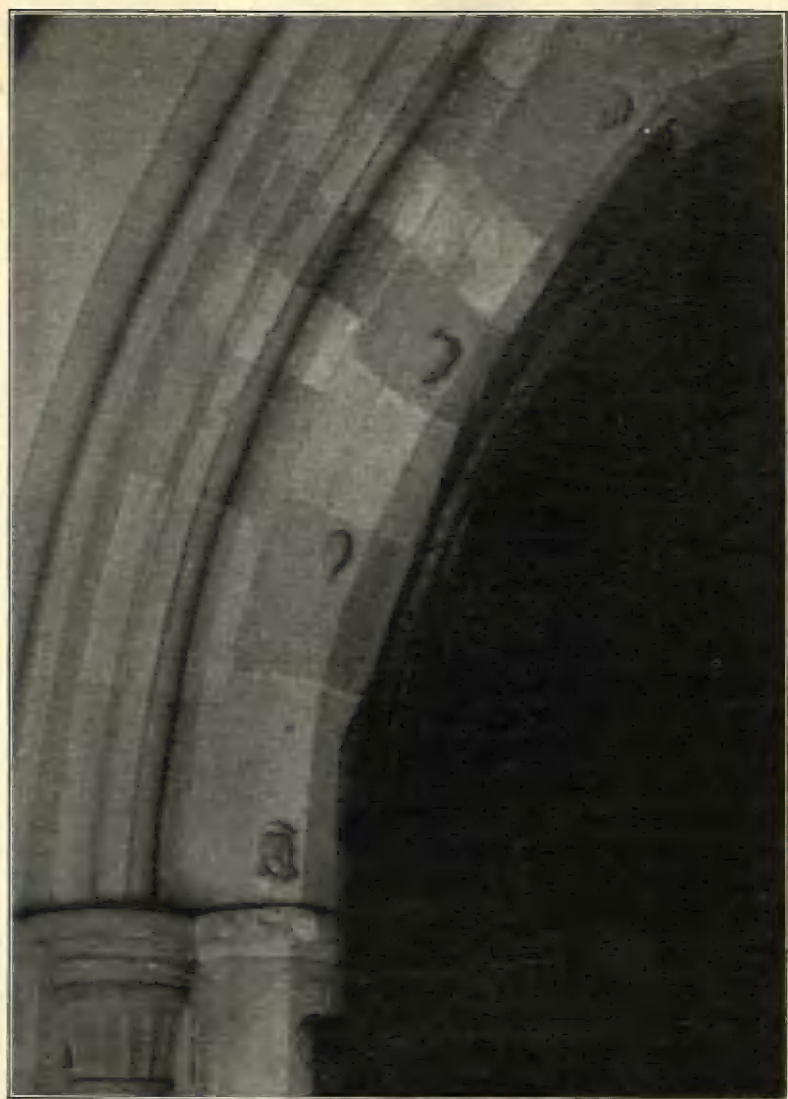


Fig. 2. WOTTON CHURCH: SOUTH DOORWAY: WEST SIDE.

P. M. JOHNSTON, Esq., F.S.A., offered some remarks upon the carved heads on the south doorway of Wotton Church, Surrey.

"The date of this door can be fixed, from architectural

evidence, as between 1200 and 1215. It is an insertion in the earlier (pre-Conquest) wall of the tower. It has a circular segmental rear-arch, which rather suggests older work re-used; on the exterior it presents a lofty pointed opening, 8 ft. 9 in. high by 4 ft. 9 in. wide. The arch is of two orders, with a hood-moulding, resting upon chamfered jambs, in which is a banded nook-shaft having capital and base, the abacus of the capital being carried as an impost round the inner order and hood-moulding. The capitals are circular in form and moulded, with a deep bell, ornamented with vertical fluting of concave section, reminiscent of the scallop capital in late Norman work, in which respect it recalls the arcade capitals of Aldingbourne Church, Sussex. The outer order of the arch displays the keel-shaped moulding, set between square channellings and chamfers: the hood-moulding appears to be a clumsy restoration, and the jambs and part of the inner and outer orders of the arch have been renewed, but probably these features are a reproduction of the old work. The voussoirs of the two arch orders are worked alternately in chalk and green fire-stone. It is noteworthy that a similar alternation is found also at Aldingbourne.

The inner order of the arch has a broad chamfer, and standing out from the face of this chamfer is a series of delicately carved heads or busts. They occur in the alternate voussoirs of green fire-stone. The number of these heads is eight, four on each side, but the two lowest on either side are modern, having been renewed in Bath stone. The heads vary in height from 2½ in. to 4 in. Until 1857 the whole arch was thickly cased in stucco, which accounts for the heads being so well preserved.

The head on the left of the apex of the arch represents a layman, with clean-shaven face and flowing hair; opposite him is a priest. Below the layman is the bust of a queen, with a low crown: she wears a pleated wimple. Opposite the queen is the head of a king, clean shaven, with long flowing hair, wearing a low crown consisting of three ribs or hoops, from which rise flat trefoils, alternating with single lobes. Below the queen is another layman, wearing the circular brimmed hat, with a knob or button on the top similar to the classical *petasus*: the face is clean shaven. Opposite this layman is a pope, clean shaven and wearing the early pyramidal form of tiara, rising from a circular band and terminating in a ring and button. Several examples of this early form of tiara are known, notably the statues of the south porch of Chartres Cathedral, where the figures of the Popes Clement, Leo, and Gregory all wear a head-dress identical with that in this figure at Wotton, but these are not earlier than about 1240, so that the Wotton pope is about a quarter of a century older, and, so far as can be ascertained, this is the oldest repre-



Fig. 1. ENGLISH RELIQUARY CASE OF PEAR-WOOD, c. 1500. FRONT VIEW, (1)

sentation of the papal head-dress extant. At Idsworth Church, Hampshire, is a late thirteenth-century painting of a pope also wearing this steeple form of tiara, while a similar head-dress is to be seen on the approximately coeval painting, at Parnes, of Clement IV giving by bull the crown of the two Sicilies to Charles, Count of Anjou, on 26 February, 1265. Mr. Johnston called attention to the fact that while all the other faces are carved with a curious smile or derisive expression, that of the pope bears an expression of anger, with knitted brows, sunken eyes, and down-drawn mouth. He suggested that from the appearance of these heads some reference was intended to the Great Interdict of 1208-14. On this theory he conjecturally identified four of them with King John and his queen, Isabella of Angoulême, Pope Innocent III, the vicar of Wotton, and the patron of the living, Ralph Camoys, a supporter of the barons' cause."

Mr. G. J. TURNER thought that the pope's portrait looked later than the time of Innocent III, and the papacy was more unpopular towards the middle of Henry III's reign than at the time suggested by the author. The supposed portrait of John was more like Henry III in his infancy, and that of Queen Isabel was too old for the wife of John: perhaps she was represented as she was in the reign of her son, Henry III.

Mr. JOHNSTON replied that John and his queen would be more likely to be placed together than Henry III and his mother. The papal head was most likely that of Innocent, since he was the object of violent hatred and opposition; and the door could not be later than 1215. The carvings were evidently contemporary with the doorway, and not added later.

The PRESIDENT was not inclined to put such a subtle construction on the carvings, and was of opinion that all sorts and conditions of men were represented, without any particular reference to political events.

H. CLIFFORD SMITH, Esq., M.A., F.S.A., exhibited an English reliquary case of carved pear-wood, *circa* 1500, on which he read the following notes:

"The outline of the case somewhat resembles a stirrup. The lid, which opens on two hinges, is decorated above with a crenellated moulding and below with a design in the form of a flat ogee arch, from the apex of which springs a conventional flower. To the left of the latter is a figure of St. James and to the right that of St. John. St. James carries a staff surmounted by a cockleshell, which appears also on his hat. The other son of Zebedee

bears his usual emblems, a book and a chalice out of which rises a serpent. The back of the case is carved with a single flower of formal design, and flowers, also of conventional pattern, occur on the sides. The whole ground is hatched. The hinge plates on the bottom and the escutcheon on the upper part of the lid are of engraved brass; the brass button on the top is evidently of later date. The back and top are furnished with two holes for straps. The interior is painted green. The case is $4\frac{1}{2}$ in. high, $3\frac{1}{2}$ in. wide, and $1\frac{1}{8}$ in. deep.

This rare and interesting specimen of mediaeval art was discovered as far back as 1841 in the village of Loddon in Norfolk, where, in pulling down an old cottage at a place called 'Gravel Pits', it was found (according to the account which has come down with it) embedded in an outer clay wall. It then came into the possession of Mr. James Cole Copeman, of Loddon, from whom it passed into the hands of the present owner, the Rev. Percy Hattersley Smith, who has kindly allowed me to exhibit it before the Society.

The case was apparently worn attached to the girdle by straps passing through the two holes, and hung in the same manner as the contemporary bag or *gypciére*. It may have been intended to carry about a relic enclosed in a metal case, but more probably contained a small portable shrine, perhaps in the form of a triptych. The shape of the interior corresponds in outline with that of a pax; there is not, however, sufficient depth for the handle with which a pax is furnished.

Apart from the fact that its history is known there can be little doubt that the object is of English workmanship. The date, judging from the style of the figures, and from the woodcuts in the early printed books, is evidently the last years of the fifteenth century; while a comparison with figure designs in contemporary English glass, embroidery, brasses, and the paintings which occur, above all, on the Norfolk screens, should be alone sufficient proof of an English origin.

Nevertheless there are always critics who refuse to acknowledge the provenance of mediaeval works of art which are obviously of English origin. In order to meet such objections, and to strengthen the evidence in favour of such origin, I have selected a single branch illustrative of English mediaeval craftsmanship—namely, embroidery, and have compared photographs of some contemporary English vestments, and also tracings (figs. 5, 6, 7, 8) of several varieties of the floral devices embroidered on them. These offer a striking parallel with the floral design carved on the back of the case now on exhibition (fig. 2).

English antiquaries must on all occasions be prepared to defend their native antiquities, since, however strong the evidence may be



Fig. 3, SIDE VIEW.

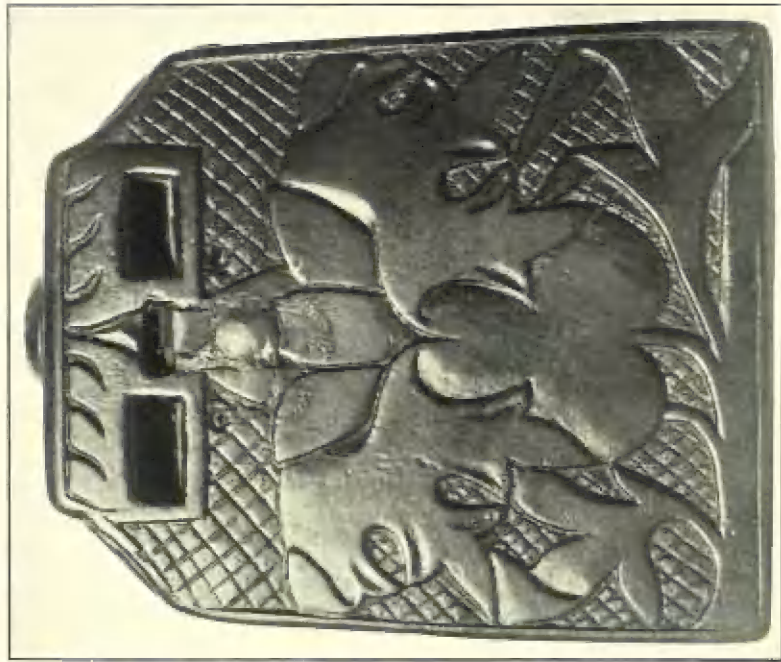


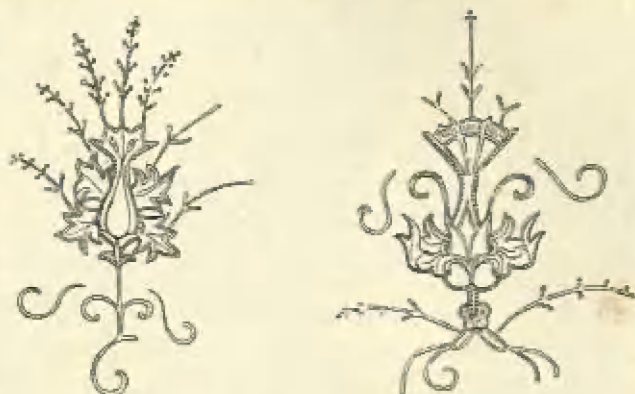
Fig. 2, BACK VIEW.

ENGLISH RELIQUARY CASE OF PEAR-WOOD, c. 1700.



Fig. 4, SIDE VIEW.

in favour of an English origin, critics are ever ready to attach a foreign ascription even to objects discovered on British soil. I have lately met with an interesting example of this. In a recent



Figs. 5 and 6. FLORAL DEVICES EMBROIDERED ON PORTIONS OF AN ENGLISH COPE OF BLUE VELVET OF ABOUT 1500, IN THE VICTORIA AND ALBERT MUSEUM.



Figs. 7 and 8. FLORAL DEVICES EMBROIDERED ON THE ORPHREYS OF AN ENGLISH CHASUBLE OF THE EARLY SIXTEENTH CENTURY FROM HEXHAM, IN THE VICTORIA AND ALBERT MUSEUM.

article entitled, 'Über sogenannte "englische Stickereien" des XV und XVI Jahrhunderts,' in the *Zeitschrift für christliche Kunst* (1910, vol. xxiii, p. 213), Dr. Fritz Witte claims as Flemish the whole group of English embroideries of the kind to which I have just alluded.

Without entering further into a discussion on the subject of ascriptions, I would like in conclusion to note certain references to the interesting floral devices referred to, which occur in the *Inventories of Christchurch, Canterbury*, edited by Dr. Wickham Legg, F.S.A., and Mr. St. John Hope. In the inventories taken about the time of the Metropolitan Visitation in 1563, lists are given of vestments which are embroidered, amongst others, with the following flowers: 'Burres,' probably prickly flowers or fruit; 'Columbines'; 'flowre de luyces'; 'pome garnettes'; simply 'flowers'; 'water-flowers'; and finally, on pp. 217 and 228, 'water flowers called coptions,' which are probably the conventional flowers to which I have drawn attention."

The PRESIDENT thought that the exhibit once contained a devotional tablet and had been carried by some devout person. The English origin was doubtful and he himself thought it might be Flemish, but there was a curious tendency abroad to deny the existence of any English school of art and to credit the Flemings with our mediæval productions.

Thanks were ordered to be returned for these communications.

THURSDAY, 16th FEBRUARY, 1911.

Professor FRANCIS JOHN HAVERFIELD, LL.D., Vice-President, in the Chair.

The following gifts were announced, and thanks for the same ordered to be returned to the donors:

From the Author (George E. Jeffery, Esq.):

1. Notes on Cyprus, 1905. 4to. London, 1906.
2. Byzantine timber building in Cyprus. 4to. London, 1907.
3. Famagusta. 4to. London, 1908.
4. The Church of the Holy Sepulchre, Jerusalem. 4to. London, 1910.

From the Editor:—Wreyland documents, edited, with introduction and notes, by Cecil Torr, M.A. Privately printed. 8vo. Cambridge, 1910.

From the Author:—Glimpses of bygone Bath. By Rev. C. W. Shickle, F.S.A. 12mo. Bath, 1911.

From Henry B. Wheatley, Esq., F.S.A.:—Two volumes of MSS. entitled, 'Reliquiæ Galeanae, or a miscellaneous collection of letters relating to the antiquities of Great Britain by eminent antiquaries. Tran-

scribed from the manuscripts of Roger Gale, Esq., F.R.A.SS.; by George Allan, F.A.S. . . . 1777.

From the Editor:—*Llyfr Baglan*, or the book of Baglan, compiled between the years 1600 and 1607 by John Williams. Edited, with notes, by J. A. Bradney, B.A., F.S.A. 4to. London, 1910.

A special vote of thanks was accorded to Mr. Wheatley for his gift.

Notice was given of a ballot for the election of Fellows to be held on Thursday, March 2nd, 1911, and a list of the candidates to be balloted for was read.

FRANK KING, Esq., read a paper by Dr. T. Ashby, F.S.A., A. E. Hudd, Esq., F.S.A., and himself, on the excavations at Caerwent, Monmouthshire, in 1910.

The President of the Caerwent Exploration Fund, Viscount Tredegar, rented a field and garden, called the 'Gaer', to the west of and adjoining the churchyard on the south side of the main road. The whole of this has been excavated with very interesting results. Fronting on the main road, which was the Roman road, a series of shops and workshops was discovered. The buildings in their early states were all very similar in plan, but some had been altered very considerably, and in two cases others had been combined to form one large building. The shops naturally occupied the front of each house and were small, being only from 8 to 9 ft. square. They all had wide entrances or openings at the front and, where the alleys between them were wide enough, at the sides also. Running just outside the front of these shops was the street drain. The large rooms behind the shops had been fitted with furnaces, but only sufficient was left to show that a great deal of heat had been used. In one of the rooms three small bars of lead $6\frac{1}{2}$ in. long, 1 in. wide, and $\frac{1}{2}$ in. thick, and a small piece of ornamental lead, were found, suggesting that the working of lead formed part of the trade carried on. The furnaces, from the scanty remains, appear to have been built of the local yellow sandstone, which soon goes to pieces under the action of fire.

The three westernmost shops were combined at a later date to form one large house (House no. XV s), as were also the three next again to the east on the opposite side of the cross street (House no. XVI s).

In the east block of House no. XV s was a cellar quite unlike anything yet found at Caerwent. It measured 12 ft. 9 in. by 8 ft. 9 in., and was approached by a flight of five steps in the north-west corner, having a total descent of 4 ft. 2 in. The floor

was of good lime concrete, and the cellar had a narrow window in its south wall which had been blocked up in later Roman times.

In House no. XVI s the best find was a small sandstone altar *in situ*, bearing the inscription :

DEO
MARTI
OCELO
AEL. AGVS
TINVS O P
V. S. L. M.

In House no. XIX s, further to the east again, a quantity of fine coloured plaster was found belonging to the early building. To the east again was another cross street, a continuation of the one from the North Gate. Just here a large sinkage had taken place, part of the street and the wall of the house adjoining having gone down bodily. Apparently there had been a natural hollow which had been filled up in early Roman times (for several fragments of Samian ware, Dragendorff shape 29, were found), and the filling then consolidated with the weight above.

Professor GOWLAND congratulated Mr. King on the manner in which he had presented the paper to the meeting. The buildings seemed to him more substantial than at Silchester; and he regretted not having seen the 'furnaces' on the spot. One shown on the screen might or might not have been intended for smelting, but in any case they were not suitable for operations on a large scale. The ingots of lead were no indication of ore-smelting at Caerwent, but represented some small lead industry, the supply coming from the Mendips or Cardiganshire in larger ingots. The alleged solder needed examination, but solder had been found at Silchester. One of the rings was extremely curious and seemed to be made of pewter. The paper was an excellent record of the good work being done at Caerwent.

Mr. REGINALD SMITH referred especially to the burials discovered above the excavated buildings, and inquired as to their orientation. It was clear that the town was in ruins and its walls obliterated before the graves were dug, and a considerable interval had to be allowed; but mediaeval graves would not have contained iron implements and weapons, and some of the iron on exhibition might be of the Viking period; for example, the shears, spear-head, and broad-bladed axe-head. Further, mediaeval burials would have been in the churchyard, and there was nothing to show that the site had ever been within the consecrated area. The ornamental panel of lead, with scrolls of foliage in relief, seemed to him more like thirteenth-century work than Roman.

Mr. FORSTER remarked that the range of buildings described in the paper bore the same relation to the Forum as the range of buildings including the pottery-shop to the supposed Forum at Corbridge; and a comparison of the two sites might prove useful. On the south side of the street were the same narrow buildings on both sites, divided by narrow alleys; and at Corbridge the pottery in them might be of the late fourth century.

Mr. STEPHENSON said parallel cases of encroachment on the street existed at Silchester, but he doubted if there was another cellar of that kind in the South of England. The paper showed that great care had been taken in determining the succession of buildings on the same site. The skeletons might have belonged to wanderers camping on the site after the town was in ruins. Many bodies were interred indiscriminately at Silchester on the top of the ruined wall or elsewhere. Mr. Lyell's supplementary exhibition had involved a vast amount of care and labour, which should not pass unrecognized. Mr. Waterhouse had mounted the specimens, but the material had all been collected from the soil and prepared by Mr. Lyell himself.

Mr. LYELL said that some of the pits excavated during last season seemed to be under buildings and therefore possibly pre-Roman; those in the courtyards would contain the Roman rubbish. The vegetable remains had still to be worked out, but the trays exhibited by him contained insects, collected during the last twenty years at Caerwent and Silchester, of sixty different species. Natural history specimens might tell as much about life in Roman times as potsherds and other manufactured articles. Mr. Waterhouse deserved the gratitude of the Society for his mounting of the specimens, which were not entire insects but only the harder parts of beetles, for instance, barely recognizable in their present form. It was clear that the furniture beetle was a house pest in Roman times, as it had been found in nine different lots. One specimen was exceptional, but most of the species were such as one would expect to find.

Mr. PEERS observed that very few architectural details had been found; but, as often on Romano-British sites, there were humbler fragments that had an interest of their own. For instance, the end of a gable had evidently been decorated by four pillars with another on the top, an arrangement that did not square with any sort of classical work. In an out-of-the-way corner of the empire native designs might well have lingered on, and some day might be connected with the bronze workmanship of the period. He had seen several pieces of lead decorated

in the same style as that exhibited and found in Roman surroundings; and at Leicester there was Roman foliage that looked like Elizabethan work. It was curious to find instances of the same style centuries apart, but every one was not bound to adopt the decorative style of his own day.

The CHAIRMAN thought the paper a model of lucidity and direct exposition, and the discussion worthy of the paper. It was a melancholy pleasure to hear the last of Caerwent, for he understood that houses and landlords prevented the completion of the site. Perhaps the excavators would transfer their energies to the neighbouring Caerleon. The encroachments on the public road at Caerwent were worse than at Silchester, possibly because land was more valuable. He was curious to know what were the characteristics of a 'late Roman skull' referred to in the paper; and compared the burials to those found at Bath, where the masonry had been ignored by grave-diggers of the seventh to ninth century; but the suggestion that those at Caerwent were of the Viking period should be borne in mind. It would be most convenient to have separate drawings of each stage in the excavated buildings, as different tints and shadings were rather confusing on the plan. The subject that Mr. Lyell had taken up was important and might lead to interesting results. The decline of Greece and Rome had been attributed to the Anopheles mosquito, and research might settle the question once for all. There were many resemblances in Roman work to the Renaissance; and capitals found at Barhill¹ had a curious resemblance to work of the eighth or ninth century. The finials constituted an anticipation of mediaeval work: there were other examples from Llantwit, Bath, and Somerset.²

Mr. KING replied that the 'furnaces' were merely open hearths, and it was difficult to make a distinction. All the lead exhibited was found together under a concrete floor and was evidently stock-in-trade; the ornamented piece was found 6 ft. from the surface. As many as 130 skeletons were uncovered, all more or less crushed and without coffins, lying with the head at the west end of the grave. Only two small spear-heads were found with the bodies, the rest of the iron coming from the building-sites. The skulls had only a slight admixture of Saxon elements.

Thanks were ordered to be returned for this communication, which will be printed in *Archæologia*.

¹ *Proc. Soc. Antig. Scot.*, xl (1905-6), 542.

² *V. C. H. Somerset*, i. 260.

THURSDAY, 23rd FEBRUARY, 1911.

CHARLES HERCULES READ, Esq., LL.D., President,
in the Chair.

The following gifts were announced, and thanks for the same ordered to be returned to the donors:

From the Author:—A chapter in the history of Celadon. By Charles H. Read, LL.D. 8vo. London, 1909.

From the Author:—Derbyshire cave-men of the Roman period. By W. Storrs Fox, M.A., F.G.S. 8vo. n.p. 1911.

From the Author:—Baildon and the Baildons. By W. Paley Baildon, F.S.A. Part III. Privately printed. 4to. London, 1911.

From the Author, Professor H. Breuil:

1. Les plus anciennes races humaines connues. 8vo. Fribourg (Suisse), Paris, 1910.

2. Sur la présence d'éolithes à la base de l'éocène parisien. 8vo. 1910.

3. Bibliographie, 1890-1910. 8vo. Fribourg (Suisse), 1910.

From Professor Haverfield, V.P.:—Report of the Keeper of the Ashmolean Museum for the year 1910. 8vo. n.p. 1911.

Notice was again given of the ballot for the election of Fellows on March 2nd, and the list of the candidates to be balloted for was again read.

R. R. MARETT, Esq., M.A., Reader in Social Anthropology, Oxford, read a paper on recent archaeological researches in the island of Jersey, his object being to give some account of the contents of the cave of St. Brelade, clearly of pleistocene age; to notice the contents of the cave of St. Ouen, the period here being more uncertain, though not improbably pleistocene, and to discuss the general relation of the pleistocene to the post-pleistocene traces of prehistoric man in Jersey in the light of the available archaeological and geological evidence.

The excavation of the cave of St. Brelade was undertaken by the Société Jersiaise in July, 1910, and some digging was also done by Mr. Marett himself later in the year. Among the animal remains discovered were bones and teeth of *Rhinoceros tichorhinus*, *Rangifer tarandus* (reindeer), and a small species of horse and deer. From these remains two deductions can be made: (1) that this is a pleistocene fauna, though of what period it is not easy to decide, and (2) that, when these animals were alive, Jersey was connected with the Continent. Among human remains nine teeth from a lower jaw were found lying in their original position, but the bone had unfortunately been completely absorbed by the surrounding clay. A rich spoil of flint imple-

ments was discovered. This is peculiarly interesting, as no flint is now found *in situ* on the island, although chalk occurs near the opposite coast of the Cotentin. It may well be, then, that the sea has eroded away or now covers beds of chalk a good deal more accessible to the pleistocene inhabitants of Jersey than the existing chalk deposits of the Cotentin.

The cave of St. Ouen was explored in 1881, but some digging which Mr. Marett undertook towards the end of 1910 has led him to believe that the cave will bear fuller investigation, and the Société Jersiaise, it is satisfactory to know, intends to take the matter up without delay. Of osteological remains, except the lower jaw of a deer found in 1881 and traces of bone waste, nothing has hitherto come to light that recognizably belongs to the anatomy of any particular species, human included. The cave has yielded a large number of implements of a somewhat ambiguous character, it not being quite clear that they are Mousterian, as those from St. Brelade undoubtedly are. He was inclined, provisionally, to believe the St. Ouen industry slightly the earlier of the two, but considered that further exploration was necessary to settle the point.

With regard to the relation of the pleistocene to the post-pleistocene traces of man in Jersey, from an archaeological standpoint, attention has to be drawn to a series of implements found on the Jersey moorlands. Some of these have been classed as Chellean, but the ascription seems far from clear; the others are Mousterian.

Geologically attention has to be directed to the complicated question of the raised beaches of the island. These beaches occur at levels of 140 ft., 90 ft., and 25 ft. above mean sea-level. It is to the period of submergence corresponding to the 90 ft. raised beaches that the scooping out of the two caves has been assigned. Unfortunately no marine remains are found in any of these beaches, which makes it impossible to determine the relative age of the pebble beds. Secondly, the loess, which crowns the heights of the island, may be considered in this connexion, and its deposition may be ascribed to sub-glacial conditions operating at intervals through the so-called Ice Age.

Of evidence which may serve to correlate the archaeological and geological position there may be mentioned the discovery of a bone of *Bos primigenius*, and of a human skull found at the bottom of the loess bed on Green Island. This loess lies immediately upon the diorite rock, and is capped by a more or less peaty stratum containing neolithic pottery and implements.

Professor GOWLAND observed that the banded stone of which worked specimens were exhibited was really chalcedony, and

there should be no difficulty in tracing the material to its source. It occurred naturally not in nodules but in lenticular pieces. The white flints were difficult to explain, and were in his opinion not the result of patina; if fractured they would no doubt be seen to be white throughout.

Mr. REGINALD SMITH remarked that a paper read to the Society on the exploration of a palaeolithic cave was in the nature of a novelty and all the more welcome on that account. The accumulation of rock débris was a common feature, but hitherto not satisfactorily explained. In the opinion of Dr. Rutot there was at the extreme end of the palaeolithic Cave period an epoch of general dilapidation (*l'époque du grand détritique*), when peculiar atmospheric conditions splintered rock-faces and choked up caves. The Jersey caves, however, seemed to contain nothing later than the Moustier period, and other circumstances might have prevented further occupation by man. The French place-names which were used to denote the various stages of the palaeolithic period were unfamiliar enough as they stood, without being turned into adjectives, a process that was moreover very difficult and unusual in English. There was a certain ambiguity in such a phrase as 'a Moustier flint', but it was easy to avoid confusion. The presence of the reindeer might help to fix the date of the caves with precision, but in his opinion the two series were contemporary, one being worked implements, the other the refuse of a workshop. The patination, where noticeable, was very slight, and the flints were practically in their original condition, as were those of the same age from High Lodge, Mildenhall, for instance, in this country. The bluish tint of some was due to the original black showing through a thin film of white. The flint pebbles found in numbers at the north-east angle of the island might have furnished the raw material, but there were probably other and better sources during the Moustier period. This was generally held to correspond to one of the great glaciations (either the Riss or Würm glaciation of Penck), possibly to a period of elevation, when Jersey would be joined both to France and England; and it was not before the end of the Cave period that the sea of Flanders broke through the Straits of Dover and finally severed Britain from the Continent. The Jersey specimens seemed to him to resemble flints from the south coast of England, the banded quality included. The raised beaches mentioned in the paper agreed fairly well with the terraces of the Thames, and might have been produced under similar conditions, namely in the intervals between successive upheavals of large areas. The loess, if properly named, would be a comparatively late pleistocene deposit, but much

depended on its nature, whether deposited by wind or water, the water-laid loess being much earlier in Northern France and known as 'limon à points noirs', or 'limon Hesbayan'. A whole series of palaeolithic skulls were surprisingly civilized and modern in appearance, and the remnant found in Jersey should certainly be examined by an expert. Mr. Marett's paper had been of great interest and value, and further research should not be prevented by any lack of funds.

Mr. MARETT replied that he was not entirely convinced of the English origin of the flint in Jersey, nor could he agree to drop the article before Moustier if the name were used as an adjective unchanged. The deposition of loess in Jersey began a long way back, probably before the erratics reached the high levels of the island. The 'Head' of the English south coast had been invoked to explain the rubble-filling of the cave and gully, both being perhaps due to the same causes. The opinions given with regard to the flints by Prof. Comont and Abbé Breuil were based on photographs, not on personal inspection, and were purely provisional. The skull seemed to be of the Cro-Magnon rather than the Neanderthal type.

The PRESIDENT said that popular interest in the Cave period would be excited if the Society could have other accounts presented in an equally attractive form. Mr. Marett's paper had been an agreeable change, and dealt with large problems that would have to be solved in the future. The teeth shown on the screen as human had hardly that appearance, but he was content to accept the verdict of the authorities who had examined them.

Mr. Marett's paper will be printed in *Archaeologia*.

HAROLD BRAKSPEAR, Esq., F.S.A., exhibited a number of ornamental lead panels from Bardney Abbey, Lincs. (fig. 1), and Stanley Abbey, Wilts. (fig. 2), together with a brick on which a similar panel had been impressed before baking (fig. 3). The panels had probably been used as applied ornament, and might have been gilt in the first instance. Their designs were derived from fifteenth-century window tracery, with which they were probably contemporary. That the panels were meant to be used against a background of wood or other material was shown from the fact that some of them were flat on one side, while the others, though not flat, were much more plainly treated on one side than the other. In one example several panels of the same design were soldered together, and it was clear that they could not have served the purpose of ventilating panels in windows, as had at



Fig. 1. LEAD PANELS FROM HARDNEY ABBEY ($\frac{7}{8}$).



Fig. 2. LEAD PANEL FROM STANLEY ABBEY ($\frac{1}{8}$).

first seemed possible. The best-preserved panel was in the form of a four-light traceried window, having in the main lights a lily-pot with five flowers, a very beautiful piece of work.

The SECRETARY exhibited in illustration of Mr. Brakspear's remarks a complete casement from Hampton Court, by permission of H. M. Office of Works (fig. 4). This dated from about 1530, and contained two lead ventilating panels in their original position. A third panel, which had been taken from another casement, was also exhibited (fig. 5).



Fig. 3. BRICK WITH IMPRESSION OF LEAD PANELS.

Mr. WEAVER said the closest parallel he knew was the lead tracery at Newport Church, Essex. The tracery exhibited had doubtless been attached to a piece of furniture as ornament.

The PRESIDENT suggested that there was an attempt to imitate in lead the ivory arcading on the sides of caskets dating from the fourteenth century. If the lead were gilt and the background coloured, the effect would not be unsuccessful. The tile on the table had evidently been impressed before firing with lead and not wood, as the edges were uneven.

Thanks were ordered to be returned for this communication and exhibition.

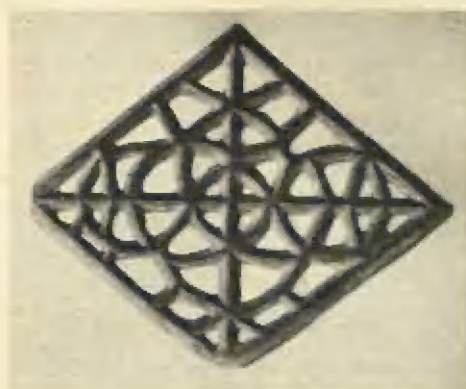


Fig. 5. LEAD VENTILATING PANEL FROM HAMPTON COURT ($\frac{1}{2}$).

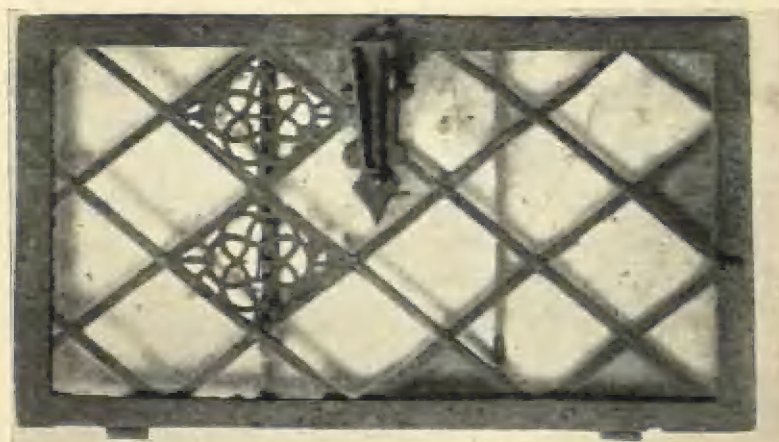


Fig. 4. CASEMENT WITH VENTILATING PANELS FROM HAMPTON COURT, c. 1590.

THURSDAY, 2nd MARCH, 1911.

CHARLES HERCULES READ, Esq., LL.D., President,
in the Chair.

Hylton George Hylton, Baron Hylton, was admitted a Fellow.

This being an evening appointed for the election of Fellows, no papers were read.

The ballot opened at 8.45 p.m. and closed at 9.30, when the following were duly declared elected Fellows of the Society:

Charles Hilary Jenkinson, Esq., B.A.
Charles Eyre Bradshaw Bowles, Esq., M.A.
Horace Wilmer, Esq., M.Inst. C.E.
Reginald Campbell Thompson, Esq., M.A.
Edward Thurlow Leeds, Esq.
Arthur Edward Henderson, Esq.
Rev. Edmund Robert Nevill, B.A.
Robert William Ramsey, Esq.
Sydney Decimus Kitson, Esq., M.A.
Herbert Henry Edmund Craster, Esq., M.A.
Louis Francis Salzmänn, Esq., B.A.
Philip Guyon Laver, Esq.
Alexander Hamilton Thompson, Esq., M.A.
John Pattison Gibson, Esq.
Duncan Hector Montgomerie, Esq.
Robert Martin-Holland, Esq.

THURSDAY, 9th MARCH, 1911.

PROFESSOR WILLIAM GOWLAND, F.R.S., Vice-President,
in the Chair.

The following gifts were announced, and thanks for the same ordered to be returned to the donors:

From Viscount Dillon, F.S.A.:

1. Illustrated guide to the armouries, Tower of London. By Viscount Dillon. 8vo. London, 1910.
2. National Portrait Gallery. A list of the paintings, sculptures, miniatures, &c., with 108 illustrations. 8vo. London, 1910.

From the Author:—Visitations of Devonshire churches. By H. Michell Whitley. 8vo. n.p. 1910.

From the Author:—The art of working metals in Japan. By Professor Gowland, F.R.S., V.-P.S.A. 4to. Westminster, 1910.

From Harold Sands, Esq., F.S.A. :— *Der Festungsbau im alten Orient.*
Von A. Billerbeck. 8vo. Leipsic, 1903.

From the Author, M. L. Bouly de Lesdain :

1. *Les armoiries des villes d'Allemagne et d'Autriche.* 8vo. Paris, 1903.
2. *Notes sur quelques changements d'armoiries aux XII^e et XIII^e siècles.* 8vo. n.p., n.d.

The following were admitted Fellows :

Charles Eyre Bradshaw Bowles, Esq., M.A.
Robert William Ramsey, Esq.
Louis Francis Salzmann, Esq., B.A.
Alexander Hamilton Thompson, Esq., M.A.

R. GARRAWAY RICE, Esq., F.S.A., presented the following report as Local Secretary for Sussex :

"Palaeolithic Period. Following up my researches of 1904, which resulted in the discovery of palaeolithic implements in the terrace gravels of the river Arun and the western Rother,¹ I have on numerous occasions searched such places in the locality where sections of gravel have been exposed. The yield of palaeolithic worked flints has been small, but the finding of at least six more examples, if not seven, has to be recorded. The pit on Coates Common, where I discovered my first Sussex palaeolith in 1904, has yielded another typical and well-patinated flake, measuring $3\frac{1}{2}$ in. by $2\frac{1}{4}$ in. It was picked up in May 1908, from a road at Coates, then recently retailed with gravel from the pit, which is now practically unworked.

Another pit was opened in 1908 just within Sutton parish (adjoining Coates), and about 100 ft. above o.d., and upon one of the gravel heaps I found, in 1909, a palaeolithic ridged flake $3\frac{1}{2}$ in. by $1\frac{1}{2}$ in., having a bulb of percussion with *écaillage*.

A pit was opened in 1905 in the parish of Storrington, to the west of Hurston Warren, near Lickfold in Wiggonholt parish, on the same terrace, and about 1,000 yd. north from the gravel-pit, which yielded Mr. W. Paley Baildon an exceptionally good flake in 1904, recorded in my report. The terrace, which at this spot is about 50 ft. above o.d., is about 75 yd. from the stream called on the Ordnance map the River Stor. I searched the output from this pit on several occasions and found, in 1909, a small ridged flake showing a slight bulb of percussion.

At Coldwaltham, about half a mile north-west from the Arun, a large sand-pit is worked on the side of a hill. The surface varies from about 80 to 100 ft. above o.d., and in it occur some pockets, in which much-battered drift, consisting of flints, iron-

¹ *Proceedings*, xx, 197.

stone, and chert, has been deposited. Frequent searching of this drift, which is screened and used as road material, led to the finding of two very rough clumsy outside flakes, viz. one in 1907, much battered, and another in 1910, having a good bulb of percussion. In the latter year I also found what appears to be a small pointed palaeolithic implement, $2\frac{1}{2}$ in. long, having a slight ogee twist, but this specimen seems somewhat doubtful. Our Fellow Mr. Haines has an exceedingly fine ovate sharp-rimmed implement, stated to have been found on a heap of screened gravel from the surface of this sand-pit, and has kindly lent it for exhibition (fig. 1).

Specimens have also been found in the east of the county. Among some neolithic worked flints found for me at Alfriston in 1907 was a very dark ochreous-coloured flake having a bulb of percussion with *écaillage*. I could not but regard it as palaeolithic, although worked flints of that period, so far as I then knew, had not been found there. I subsequently obtained seven implements from that locality, all of palaeolithic type, and doubtless belonging to that period. All were found on the surface together with neolithic worked flints, and they are for the most part of the ovate sharp-rimmed type with a white patina. A specially good one was found in the parish of Litlington, which is separated from Alfriston by the little river Cuckmere. It measures $4\frac{1}{2}$ in. by $3\frac{3}{8}$ in. at the widest part, and is about 1 in. through at the centre. It is practically identical with similar implements found on the surface in north-west Kent. This and the Alfriston implements doubtless belong to the area drained by the Cuckmere before it dwindled to its present insignificant proportions. At Bell's Field, Friston, about two miles east from the Cuckmere, Mr. R. Hilton found ovate implements, both ochreous and white and porcellaneous, and he presented a pointed one from Crow Link Gap, East Dean, to Sir John Evans, who considered that although found on the surface and not in gravel or brick earth, the implements presented features which seemed to justify their attribution to the palaeolithic age.¹ The implements of palaeolithic type found at East Dean and Burling Gap, both near Friston, have been discussed by the late Mr. J. Allen Brown.² Mr. Toms, of the Brighton Museum, states that in the Hewlett Collection there are no less than one hundred and fifty hill-top palaeoliths from this part of Sussex.

Neolithic Period. During the last six years I have accumulated a considerable number of neolithic implements, and exhibit a few representative as well as exceptional specimens. Among

¹ *Ancient Stone Implements*, 2nd ed., p. 622.

² *Journal of the Anthropological Institute*, vol. xxii, Aug. and Nov., 1892, pp. 66-68.

the more important may be mentioned: four from North Stoke, viz. a ground celt rechipped, a long narrow chipped celt, a long knife made from a flake, and a ground flake. This last may have been struck out from the flat side of a ground celt, but the edge has been bevelled from the under side by grinding at about an angle of fifty degrees. Sir John Evans¹ states that it is curious to observe how rarely the edges of flakes were sharpened by grinding, British flakes with ground edges being by no means common. From Parham come a long tapering pointed celt or pick, slightly ground and patinated white, and a good chipped celt reduced by grinding. From Storrington I exhibit



Fig. 1. PALAEO-LITHIC IMPLEMENT FROM COLDWALTHAM ($\frac{1}{2}$).

a chipped flake with the edge ground in a similar manner to the North Stoke specimen, another chipped flake ground at the edge in like manner, and a chipped celt. The above-mentioned parishes all adjoin. A finely chipped circular knife or scraper, made out of a large thin flake, comes from near Cissbury, and a chipped spear-head was found at Pulborough. There is also an interesting piece of tabular flint, found near Cissbury in 1906, sculptured by nature, and suggesting two hafted stone celts in saltire. This piece of tabular flint has been roughly chipped into circular form, and its locality (near Cissbury) tempts one to think that it may have been regarded as a totem or charm by some prehistoric man.

From Alfriston, at the east end of the county, I exhibit the

¹ *Ancient Stone Implements*, 2nd ed., p. 290.

following implements: a triangular knife, chipped and ground, of a type not at all common; a circular chipped one, and the upper portion of a long chipped knife with curved blade;¹ a chipped celt partly ground; two ground celts rechipped; the cutting



Fig. 2. NEOLITHIC IMPLEMENTS FROM SUSSEX ($\frac{1}{2}$).

edge of a broken ground celt, made by rechipping into a knife with a handle or tang; a similar one, but not so good; four large chipped borers; five hollow scrapers of a type which seems almost peculiar to the neighbourhood of Alfriston; also a good chipped celt showing numerous iron markings; fifteen arrow-heads, viz. ten from Alfriston, two from Seaford, two from Pul-

¹ *Ancient Stone Implements*, 2nd ed., p. 357. This is of the same type as a perfect one found near Eastbourne, figured by Sir John Evans.

borough, and one from Thakeham. The implement from Alfriston with chisel-edge, although with little secondary working, is not improbably an example of the chisel-ended type of arrow-head.

Perhaps one of the most important of neolithic discoveries in Sussex in recent years is that made by Captain A. J. Wade, of



Fig. 3. NEOLITHIC IMPLEMENTS FROM SUSSEX (1)

Chichester Barracks, who has found a series of flint-mines at West Stoke Clump, near that city. Captain Wade was good enough to invite me to inspect the excavations he had made in one of the filled-up pits, of which there are nineteen, and in November, 1909, Mr. Bradford and I visited West Stoke Clump under his guidance. Numerous small fragments of coarse pottery were to be found on the earth turned up by the moles and rabbits in the vicinity of the filled-up shafts. The pits appeared to be similar to those at Cissbury, which I assisted Mr. Park Harrison to excavate in 1877. The following description is from a paper by Mr. Toms, published in the *Sussex Daily News*, 3rd October, 1910 :

The pits, indicated by the mouths of shafts long since filled in, number nineteen, and lie approximately in a straight line along the eastern brow of Stoke Down. Through the kind permission of his Grace the Duke of Richmond and Gordon, Captain Wade had been enabled to excavate one

of the pits. This proved to be in shape like a gigantic Wellington boot. The shaft, 12 feet in diameter and 15 feet deep, was filled with broken chalk, but the 'toe' of the pit was found to be quite clear of filling or fallen material. Among the objects found in the pit were 2,000 artificial chips of flint, two flint knives, three flint cores, and three rough flint implements, all of Cissbury types; fragments of bone, horn (wedges), and wood, and a well-preserved example of the prehistoric miner's pick, 13 in. in length, made from the antler of a red deer. Several deep marks made by the deer-horn wedges were observed in the chalk sides of the lower portion of the pit. A point of great interest in connexion with the discovery on Stoke Down is that the depressions indicating the mouths of the shafts are so shallow that before excavation it was thought they were but the remains of small prehistoric pit-dwellings.

Bronze Age. *In 1909 Mr. Frank E. Barber, of Elsted, told me of the discovery of four bronze axes on the top of Beacon Hill near a trench, apparently connected with ancient earthworks. They were half buried in chalk, and were beneath a layer of flints about a foot thick. The axes weigh about 1 lb. each and are Bronze Age palstaves of the looped variety. The stop-ridges are well developed, and in three cases are slightly decorated by three or four raised lines. Though much alike, they are not from the same mould, and all are in a very good state of preservation. I was able to purchase, through Mr. Barber, the best of the four, and exhibit it this evening. It is $5\frac{3}{8}$ in. in length, and weighs $15\frac{1}{2}$ oz. The cutting edges of all are slightly chipped, evidently by use, but they are not in a condition to suggest that they had been brought together for recasting. One was retained by Mr. Barber, while the remaining two passed into the hands of the respective incumbents of two neighbouring parishes.

Urn found at Pulborough. At the great sand-pit above Lower Street, Pulborough, on the right of the lane leading to New Place, the workmen were removing some top soil in February, 1910, when they found the remains of a large earthen pot or urn. Eleven pieces that they thought worth picking out were thrown on to the turf, and left there until the foreman showed them to me in March. The pottery is of a coarse description and contains a quantity of pounded flint. As it appears to be of Bronze Age character, I have inserted this note here.¹ The pieces, which I exhibit, are about $\frac{3}{8}$ in. through at the thickest part, and they are devoid of ornament except for a few small indentations. A great part of the vessel must be missing, and it seems impossible to fit any of the remaining fragments together.

Camps and other Earthworks. The camps and earthworks of

¹ Mr. Reginald Smith, in the discussion of the report, said he was of opinion that the urn was later, and probably belonged to the Hallstatt (earliest Iron) Period.

Sussex have been receiving attention at the hands of the officers of the Ordnance Survey. During the past year (1910) the survey of the county has been revised and brought up to date. An earnest endeavour appears to have been made, not only to describe correctly on the maps such earthworks as have been previously assigned to wrong periods, but also to insert many others heretofore omitted.

Roman Period. The portion of Pulborough which includes Holme Street farm has long been known to be rich in Romano-British remains. I excavated in 1900¹ a small rectangular building of that period 26 ft. 6 in. square, situated in field no. 962 on the Ordnance map (and about 450 yd. from the remains about to be described). Dr. Peter J. Martin, of Pulborough, states² that about a furlong west from a circular building which he considered to be a Roman mausoleum, on an eminence overlooking Holme Street farmhouse, a waste was grubbed up a few years before, and the foundations of Roman habitations were discovered. A perfect exploration was not made, but sufficient evidences were obtained to show that there were buildings of some importance. Early in 1910 Mr. Christmas, the tenant, informed me that one of his men had come across a foundation of stone and red mortar in the field west of the farm, and in September, with the consent of Sir Walter Barttelot, the owner, I made some trial holes and soon struck the walls, which are situated in the low-lying part of the fifty-five acre field to the north-west of Holme Street farmhouse, numbered 948 on the twenty-five inch Ordnance map. The land rises gradually towards the north, and the middle of the site is about one-third of a mile due west from the place where the foundations of the supposed mausoleum were excavated early in the last century. A fortnight's digging resulted in the discovery of foundations of walls 708 ft. long, and a drain 535 ft. in length partly stripped and traced. The average depth of the remains from the surface was from about 1 ft. to 18 in. Mr. Bradford was present for a few days and assisted in the excavations and planning.

The walls, of which the first course only remained, averaged from 9 in. to 1 ft. in thickness and were of local quarried stone, ferruginous sandstone, and broken Roman bricks, all grouted together with pink mortar, which was freely used. One piece of tufa was found in the wall, which is interesting in view of the fact that such tufa was found, according to Dr. Martin, when the circular building was excavated. The walls were far from straight, and must have been set out by eye and not with a line. The whole suggested to me that the walls may have formed part of the enclosures of a Romano-British stockyard.

¹ *Proceedings*, xviii. 294.

² *Sussex Arch. Collns.*, xi. 141.

The base wall is 444 ft. in length, running from south-east to north-west. At 72 ft. from the south-west end it inclines slightly to the north, and at 39 ft. from the same end turns nearly due west. If this wall had continued in a direct line for about 375 ft. further south-east, it would have met the hedge bounding the north end of the garden of Holme Street farmhouse at 40 ft. from the north-east corner of the garden, forming an angle with it of a little more than 45° . At 154 ft. from the south-east end a wall, slightly curving to the west, runs north for 29 ft., when it meets another wall 39 ft. in length running east and west, 20 ft. of it being to the east and 19 to the west. At 36 ft. further north-west another wall runs from the base wall for 127 ft. nearly due north, and at 38 ft. further north-west another wall, 69 ft. in length, branches off from the base wall, which, after going for about 16 ft. slightly north-west, turns more to the west, and then runs due north. Against either side of the base wall, 63 ft. from the south-east end, two large lumps of ferruginous sandstone had been loosely placed, and some more pieces were found 37 ft. from the same end. About eight pieces, but not so large, had been placed on the west side of the 127 ft. wall, 26 ft. from the north-west end of it. Part of a very large brick $3\frac{1}{4}$ in. in thickness, having one of the usual bosses on it, was worked into the base wall about 15 ft. from where it turns west.

The drain, which is from 12 to 16 in. in width, is built of irregular lumps of the same ferruginous sandstone as used in the walls; it had a waterway averaging about 4 in. square. Two parallel rows of the blocks were laid about 4 in. apart on the earth at the bottom of the trench (which was not previously paved), and these were bridged over by irregular-shaped pieces, 12 to 16 in. in width, as cover stones.

The drain commences 42 ft. south-west from the base-wall, and if it had run straight up to the wall, would have met it at 134 ft. from the south-east end. The drain runs south-west for 88 ft., and then, turning nearly due south, takes a somewhat erratic course south for 447 ft., breaking off in the farm road, about 6 ft. from where the land drops at the hedge to the north of the farm pond, into which it probably formerly ran, and 23 ft. east from the ditch which now drains into the pond.

I stripped the drain from the north-west end to 54 ft. beyond where it turns south, but ascertained the rest of its course by trial holes.

It seems not improbable that the house, which up to the present I have not been able to locate, was situated on the slightly higher ground to the north of the walls excavated, in a portion of the field now under cultivation, but available next autumn. It is a curious fact that beyond the pieces of Roman bricks used

in the walls, nothing else of that period was found during the excavations, but I picked up one ordinary red *tessera*, of about $1\frac{1}{2}$ in. square, from the surface in the lower part of the field, and Mr. Christmas a piece of a flue tile in the upper part.

Excavations at West Dean Park, near Chichester, were undertaken by Mr. W. James on hearing from a former tenant that the supposed site of a Roman bath and a column had been found. In January, 1910, trial holes revealed foundations near the surface, with several broken Romano-British roofing-tiles and pieces of pottery. Specimens of these were sent to Mr. W. E. Nicholson, Hon. Sec. Sussex Archaeological Society, with an inquiry whether it was worth digging further. Mr. Nicholson placed the matter in my hands, and I suggested that further excavations should be made, as the site was clearly Romano-British, but the excavations are for the present in abeyance.

In my 1900 report¹ attention was called to some objects discovered on the site of the Romano-British camp and cemetery at Hardham. Numerous graves were found there in 1863, when the camp was cut through for the railway, and recorded by Prof. Boyd Dawkins.² Many of the objects then found are now in the Brighton Museum. Brickmaking at Hardham has been relinquished for some years, but recently the estate agent decided to work the drift gravel and sand, with which the site abounds. The ballast adjoining the old 'ballast hole' is now in course of removal, and in order to facilitate the work a deep chase was cut to carry off the water from the old workings. In the section a grave was met with, which yielded two vessels. One of dark ware nearly perfect has not been traced; the other, of inferior quality, of light pink colour and imperfect, is exhibited. In the adjoining soil about half a bushel of small pieces of pottery, including a few fragments of Samian ware, was found. Sir Walter Barttelot has kindly given me access to the excavations, and I hope to report any further discoveries.

This month a perfect Roman quern has been found (fig. 4). It is made of a hard gritstone; the diameter of the upper stone is $11\frac{1}{2}$ in., the lower nearly $1\frac{1}{2}$ in. more. With this quern was also found half of the upper stone of a beehive quern, made of conglomerate or pudding stone; it is 13 in. in diameter.

I am indebted to Prof. Boyd Dawkins for the following interesting note on these querns:

The beehive quern, which you exhibited at the Society of Antiquaries, is made of flint conglomerate of the eocene age that occurs in isolated masses and boulders on the chalk, and is probably obtained from the downs near Pulborough. It is the top stone of the quern, and has been much worn by use. Its date is fixed by its shape. I understood that it

¹ *Proceedings*, xviii. 23.

² *Sussex Arch. Collns.*, xvi. 52.

was associated with Roman remains. If so, it is the third case that I know of. The beehive quern in Britain is clearly proved by its discovery at the Lake-village at Glastonbury, and the Late Celtic settlement near Northampton, to be of the prehistoric Iron Age, and to be older than the discoidal querns which were probably introduced by the Romans. Flint conglomerate is amply represented in Britain and the Isle of Man, and especially in Yorkshire, where it is used in making rockeries in some of the gardens of the moorland farms. I am surprised that it should be found so rarely on Roman sites.

During 1909 the foundations of some Romano-British buildings at Chanctonbury Ring were excavated by the owner, Mr.

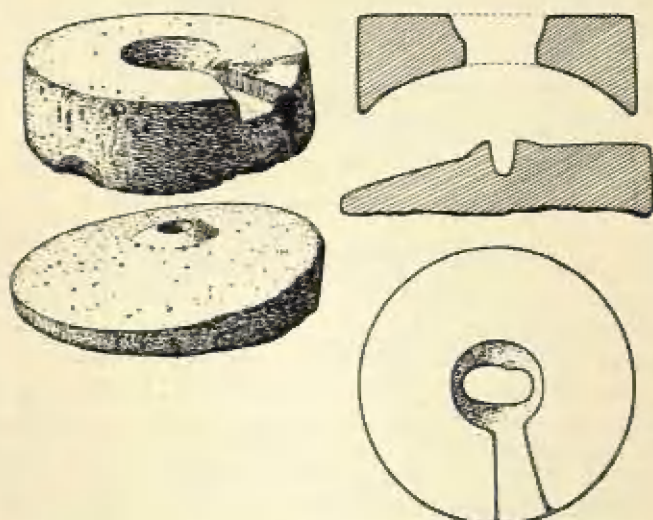


Fig. 4. ROMAN QUERN FROM HARDHAM, SUSSEX, WITH SECTIONS AND TOP VIEW.

Charles Goring, of Wiston Park, but I had not an opportunity of seeing them. An account of what was found has recently appeared in the *Sussex Archaeological Collections*.¹

It may interest the Fellows to know that the repairs to the Bignor Pavements commenced by the Society in 1905, superintended by Mr. St. John Hope and myself, have proved to be most satisfactory. After the visit of certain Fellows of the Society to Bignor in July, 1906, some further repairs were effected. I recently inspected the pavements, and I am glad to report that they seem to be practically in the same condition as they were immediately after the final repairs were completed.

It is with regret I have to record the death, in August, 1910, of Mr. Richard Tupper, the owner of the site, at the ripe age

¹ Vol. liii, pp. 131-7.

of eighty-four. He was devoted to the pavements, and showing them was one of the pleasures of his declining years.

In my report of 1901,¹ I called attention to the condition of Treyford and Elsted churches. In order that their present condition may be properly understood, it will be necessary to repeat what I said in 1901 :

The old parish church of Treyford was superseded in 1849, when a cathedral-like edifice, costing £30,000, was built on a fresh site for the united benefices of Treyford and Elsted. Since that time the old church has been allowed to become a perfect ruin ; the roof has fallen in and the floor is covered with debris, from which numerous elder and other trees are growing. It presents a sad scene of desolation. On the north side is a good, but partly blocked up arch, and on the walls there are remains of coloured decorations. The east window is of three lights splayed, and apparently of the thirteenth century.

Elsted church, which is of early Norman character, with chancel of the thirteenth century, is also not used. Notwithstanding that the church was thoroughly restored in 1873, when three memorial windows of stained glass were inserted, it is now in the first stage of ruin. A hole has already come in the roof of the nave, through which the wet has got in, causing the floor to rot, and a young tree is growing from one of the roof timbers. Whilst Treyford church seems much too far gone to be treated otherwise than as a ruin, there seems no reason, if the roof were kept in repair, why Elsted church should not last for an indefinite period.

Elsted church has received very drastic treatment since the date of my report, as may be gathered from the following notes sent me by Mr. Frank Barber, of Elsted :

Within the last twenty years service was regularly held in the church, which shows that its condition was fairly good in comparatively recent times. Even in 1903, when I came to live at Elsted, there was very little wrong with the church beyond the roof, in which wind and weather had bored a hole. Indeed, I am told it was about this time that a visitor to Harting, who regretted the neglected state of the church, wrote (in the absence of the rector of Elsted) to the Ecclesiastical Commissioners and offered to defray the expenses of putting it into such repair as would permit of it being used as a village hall or reading room. I understand, however, that this gentleman was informed such user could not be sanctioned, as it would savour of sacrilege. The rector of Elsted then made efforts to raise a fund for the restoration of the church from local landowners and magnates, but met with no success, and being advised by a local builder (quite erroneously as I believe) that the walls of the nave were in a dangerous state, he in 1906 obtained a faculty under which the picturesque old porch was destroyed and the nave reduced to ruins. The north wall of the nave was left at about its original height (proving, as I think, that it could not have been really dangerous), but the southern wall was lowered to a height of about 5 feet, while the western wall was left in a dilapidated and shapeless condition.

Some doorways and stonework, having no connexion with the north wall, were worked into it, and will probably puzzle antiquaries in future years. On the other hand, the chancel has been made weather-tight, and services are occasionally held in it.

¹ *Proceedings*, xviii. 297.

I visited Elsted church on 20th February last, and I am able to confirm Mr. Barber's report in every way with reference to its present condition. The nave is a very formal-looking ruin; the tops of the walls have been rendered in cement, and the space within is well kept.

It would seem that both of these churches have drifted into their present condition, in consequence of the building of a large new church for the united parishes and the lack of a fund with which to keep them in repair.

Our Fellow, Mr. Mill Stephenson, has been good enough to give me the following information with reference to a palimpsest brass at Northiam. The engraving on the reverse was first noted in 1909, in consequence of the plate having become loose. The brass consists of a plate $13\frac{1}{2}$ in. by 5 in., upon which is engraved the following inscription in black letter:

Here lyeth the body of John Sharp
of Northiam gentilman which married
Alyce Odyer and had issue by her vi
sonnes vii daughters and decessed
the viii daye of April 1583.

On the reverse is a portion of the border of a large Flemish brass with the words 'deyhem die staerf' in black letter, on a curved band. Mr. Stephenson thinks that the first word is perhaps part of a name, for the two following would be in English 'who died'. The spaces between the curves of the band are diapered with foliage, the upper part containing the figure of an eagle, the lower a grotesque hairy creature, with the head of a dog or wolf, carrying a staff in its left hand. The date of the engraving is late in the fifteenth century.

It seemed not improbable that the will of John Sharpe might yield some additional information to that obtained by Mr. Stephenson, so I examined it, but the result was disappointing. It is dated the 1st of April, 1583, 25th Elizabeth, and was proved in the Prerogative Court of Canterbury on the 4th of June in the same year (Rowe, fo. 30), by Thomas Sharpe, son and executor, power being reserved to Alice, relict and executrix. The testator is described as 'John Sharpe of Northiam in Sussex, gentleman'. He directs 'my bodie to be buried in the churcheyarde of Northiam aforesaide; Item I give to foure poore men that shall bear me to the churche twoe shillings eight pence by even portions; Item I gyve to the poore at my buryall twentye sixe shillinges eighte pence; . . . Item I gyve to the reparacions of the churche of Northiam six shillinges eighte pence'. Notwithstanding he directed 'to be buried in the churcheyarde', he was doubtless buried in the church, probably under or near the brass, although there are no directions in his will as to any memorial.

It is much to be regretted that the picturesque cottages of the latter part of the sixteenth century and the first half of the seventeenth, in which Sussex abounded, are gradually disappearing. These small houses, constructed, as a rule, of oak framing filled in with 'wattle and daub', and generally covered with thatch, must become in the course of not many years practically things of the past. An extremely pretty example formerly stood on the east side of the road at Lower Horncroft, about five hundred yards south from Fittleworth railway station. It was taken down within the last ten years and some villas were erected on the site. Another well-known old cottage of the same type stood until about 1902 in Lower Street, Pulborough, and had two slightly projecting oak-framed windows of three lights in the upper floor. When this cottage was taken down I was able to secure these, and I have preserved both by inserting them in a small room recently added to my house, and they are now within two hundred yards of the place where they had been for so long.

The site of the old cottage is not far from the edge of the marsh, which is often under water, and in March, 1901, the fore portion of a dug-out boat, probably of prehistoric age, was found in excavating in the front garden.

About four hundred yards further along the Lower Street in the direction of the railway station, an old malthouse, apparently of late seventeenth or early eighteenth-century date, has been taken down recently, and only last month (Feb., 1911), in removing the foundations, an interesting early drain or water-pipe was found, which I am exhibiting. It is made of baked clay, and measures $17\frac{1}{2}$ in. in length, the bore being about $1\frac{1}{2}$ in. It is cupped at one extremity, while the other is spigot ended. It would seem that the maker had taken for his model an old bored-out wooden pipe, made from the trunk of a tree, such as is not infrequently dug up in London, and if so, it is specially interesting, as showing the survival of a form necessitated in the first instance by the natural shape of the tree-trunk.

During last year (1910) two important Sussex ruins have been in the hands of the repairers, viz. Amberley Castle and Cowdray Ruins, the former at the cost of the Duke of Norfolk, the latter at that of Lord Cowdray, the respective owners.

The *Southern Weekly News* of the 26th of March, 1910, in a paragraph calling attention to the preservation of 'Cowdray Ruins', said that:

Sir Weetman Pearson, Bart.,¹ on purchasing the magnificent Cowdray Estate, has made it one of his first works to ensure the preservation of the Cowdray Ruins, that are such a source of interest to all who visit this

¹ Now Lord Cowdray.

delightful part of Sussex. Much of the tenacious ivy, which although adding considerably to the picturesque properties of a building is one of the worst of destructors, has been killed; some of the weakest of the walls have been strengthened and cracks bonded across. It is of course desirable that, so far as possible, no alteration should be made in the old architectural features of the structure, and the work is, it is pleasing to state, being carried out with a due regard to this important but often neglected principle of restoration. Mr. Thackeray Turner, the Secretary of the Society for the Protection of Ancient Buildings, indeed, bears testimony to the excellent manner in which it is being done.

The same words would equally well describe what is being done at Amberley Castle. That the removal of the ivy and other growth, and the repairing of the walls of these buildings, has provoked hostile criticism from some who do not claim to be antiquaries is perhaps not to be wondered at. These two buildings were fast falling into a very advanced state of dilapidation, and the work of repair has been taken in hand none too soon. I can but endorse Mr. Thackeray Turner's opinion, and I feel confident, although the ruins now have a somewhat new look and the outlines of the walls are more regular, that the right thing has been done. It cannot but be admitted that the life of both of the buildings, by these judicious repairs, which are not in any sense 'restorations', has been prolonged by a considerable period, probably for centuries.

On visiting Amberley Castle on the 18th of February last (1911), I found the repairs there were still in progress, but the work at Cowdray has been practically at a standstill for some little time. I ascertained, however, that the repairs would probably be started again upon the return of Lord Cowdray, who was then abroad.

In conclusion, I should like to mention that Hurstmonceux Castle, another important Sussex ruin, has been purchased by Mr. Claude Lowther, M.P., who, according to reports in the county Press, is 'restoring' the same, but of this I have no personal knowledge."

Mr. REGINALD SMITH drew particular attention to the ovate implement from Coldwaltham (fig. 1) of yellowish flint just turning white, agreeing exactly with a type found at a definite horizon at St. Acheul.¹ The broad sloping edge at the top (*en biseau*) was frequently noted in the Somme gravels, and furnished yet another proof of the close connexion between the two areas in the St. Acheul period. Another ovate implement (Litlington) had quite another surface, white or creamy with plentiful iron stains that seemed to be due to contact with decaying iron pyrites from the chalk. There were examples of the

¹ *L'Anthropologie*, 1908, 559; 1901, 113.

curious practice of rechipping neoliths after they had been carefully ground, and one long white implement belonged to the Cissbury group, which was also known to include a few of palaeolithic form. The recent discovery of another series of flint mines on the South Downs, which he had had the pleasure of visiting under the guidance of Captain Wade, suggested the possibility of dating this industry with some precision and perhaps naming a period after Cissbury. The circular depressions on the pottery looked most like certain specimens of the Early Iron Age (Hallstatt period), found in Denmark, Brittany, and especially in Saxony,¹ where this decoration was constant on the Göritz type. Mr. Rice had been most successful in collecting material for his report, and had managed to read his paper in the prescribed time, thus giving ample opportunity for discussion of its many subjects.

Mr. DALE expressed admiration for Mr. Rice's painstaking work in a district of which very little was known concerning the palaeolithic period. Whether 200,000 years was a fair estimate or not, it was clear that the palaeolithic period was a very long one, and the only means of measuring it in this country was by the terraces formed during the erosion of rivers. He was glad to see a paper announced on the succession of deposits at Knowle Farm, Savernake. Stratification was the only true criterion, and form in itself gave little information, as the types were hopelessly mixed in the river gravels. White patination was familiar, and occurred at high levels where the ground was washed away and the worked flints brought into contact with white and chalky soil. Some of those exhibited approached the neolithic form, but he thought Mr. Rice had correctly assigned them to the earlier Stone Age.

Captain WADE said he was indebted to certain Fellows of the Society for assistance in the excavation of flint mines at West Stoke. The iron-staining was not confined to flints found on the surface of the pits; many so marked were met with several feet from the surface. Weathering was a subject that had not received sufficient attention, but this and other indications might some day lead to an approximate dating of the pits.

Mr. PHILIP JOHNSTON had himself drawn attention to the disgraceful condition of the churches mentioned in the paper, and was glad to hear Mr. Rice's protest. Pressure had been brought to bear on the incumbents of both parishes, but all

¹ Sehested, *Arch. Undersøg.*, pl. xiii, xv, xx; P. du Chatellier, *La poterie ... en Armorique*, pl. 15, no. 3; pl. 16, fig. 7; Voss, *Zeitschr. für Ethnologie*, 1903, 188.

representations had been treated with indifference. Treyford was a particularly melancholy case, but he had made drawings and measurements of the paintings that had now almost perished. The rector had cut down the very vigorous undergrowth that impeded the nave and chancel. Elsted should have been saved by public opinion. There was a hole in the roof that could have been mended for £5, but no one would provide the funds; and it was then proposed to take the roof off and pull down the walls.

The CHAIRMAN congratulated the author on his successful search for palaeolithic implements in Sussex. One of the palstaves exhibited was specially interesting on account of the ridges on the blade; examples were known from Essex and elsewhere. The proportion of tin in the palstave had a wide range, and his own analyses gave 4·3 and 18 per cent. as the limits. He agreed that the staining of flints was largely due to contact with iron pyrites, which occurred in Sussex in nodules, and easily decomposed. It was called marcasite, and turned into brown oxide of iron. He recalled the discovery of Roman pigs of lead in the neighbourhood of Pulborough years ago, and thought the banded flints exhibited should rather be called stratified chalcedony.

Mr. RICE in reply sympathized with the incumbents who were confronted with the problems of repair and reconstruction; and pointed out that in certain cases generous subscriptions led to mischievous alterations in the fabric. He had only tentatively assigned the pottery to the Bronze Age, and would be glad to hear of parallels.

Thanks were ordered to be returned for this communication.

THURSDAY, 16th MARCH, 1911.

CHARLES HERCULES READ, Esq., LL.D., President,
in the Chair.

The following gifts were announced, and thanks for the same ordered to be returned to the donors:

From the Author:—Roods, screens, and lofts in Surrey. By Aymer Vallance, M.A., F.S.A. 8vo. n.p., n.d. [1911].

From the Master and Fellows of Trinity Hall, Cambridge:—Warren's book. Edited by A. W. W. Dale, M.A., LL.D. 8vo. Cambridge, 1911.

From the Trustees of the British Museum :

1. List of books forming the reference library in the Reading Room of the British Museum. Fourth edition. 2 vols. 8vo. London, 1910.
2. Catalogue of engraved British portraits in the Department of Prints and Drawings in the British Museum. Vols. i and ii. 8vo. London, 1908-1910.
3. Handbook to the Ethnographical Collections in the British Museum. 8vo. London, 1910.

Duncan Hector Montgomerie, Esq., and Robert Martin-Holland, Esq., were admitted Fellows.

P. W. P. CARLYON-BRITTON, Esq., F.S.A., read the following paper on treasure trove and the preservation for the nation of objects of antiquity :

"I feel that in offering a few remarks upon these subjects for the consideration of those present this evening I shall at least be assured of a sympathetic audience. It may, I think, be safely assumed that all will agree that objects of antiquity discovered within these realms, or elsewhere, should be preserved to the present and succeeding generations. Whether they should at once find a place in our national museums, and in which of them, or whether they should remain in private hands, are matters about which there may be differences of opinion, but the primary requirement that they should be preserved is one as to which antiquaries should be in unanimous accord. Incidentally it seems to be requisite to consider the subject of treasure trove, as, in regard to objects coming within that definition, the Crown has certain special and well-defined rights. I do not propose to deal with the subject in all its aspects nor to consider the laws or customs which were in ancient times observed in reference to treasure trove in foreign states or those laws which now pertain to it in countries other than our own.

My remarks must be confined to a consideration of what I understand the English law to be in regard to treasure trove. I may, however, add that I believe the general principles of the English law to apply throughout the United Kingdom of Great Britain and Ireland. They have also been assumed to apply in the special case of the Isle of Man, but as regards the Channel Islands, forming part of the ancient Duchy of Normandy, the old Norman law doubtless still obtains. In the matter of the administration of the law of treasure trove there are differences in practice in England, Scotland, and Ireland respectively. Moreover, in any one of the three kingdoms the rights of the Crown may have been granted away either in whole or in part to a private individual or to a corporation. This is a question

of fact to be ascertained, but in judicially interpreting such a grant the original rights of the Crown are jealously guarded and, unless the intention of the sovereign be very clearly and definitely expressed, the grantee may find that his charter is of no actual value.

Confining, therefore, our attention to English law, the earliest direct provisions on the subject of treasure trove are those contained in the laws of Edward the Confessor.

The following two versions are given in Liebermann's *Die Gesetze der Angelsachsen*, published in 1903. At p. 640 we find:

(a) *Thesauri de terra regis sunt, nisi in ecclesia vel in cimiterio inveniuntur. Et si ibi inveniuntur, aurum regis est et dimidium argenti, et dimidium ecclesie, ubi inventum fuerit, quicumque sit, dives vel pauper.*

(b) *De thesauris (in terra absconditis et) inventis. Thesauri de terra regis sunt, nisi in ecclesia vel in cimiterio inveniuntur. Et licet ibi inveniuntur, aurum regis est et medietas argenti, et (altera) medietas ecclesie, ubi inventum fuerit, quicumque ipsa fuerit vel dives vel pauper.*

The meaning of both versions is in substance the same, namely:

Treasures from the earth belong to the King, unless they be found in a church or graveyard. And if found there the gold and half the silver belong to the King and the other half of the silver to the church where the find took place whether it be rich or poor.

Lord Coke, 3rd Inst., p. 132, defines treasure trove as follows:

Treasure trove is when any gold or silver, in coin, plate or bullion, hath been of ancient time hidden, wheresoever it be found, whereof no person can prove any property, it doth belong to the King, or to some lord or other by the King's grant, or prescription. The reason wherefore it belongeth to the King, is a rule of the common law, that such goods no man can claim property, belong to the King, as wrecks, strays, &c., *Quod non capit Christus, capit fiscus*. It is anciently called *fyndaringu*, of finding the treasure.

Another definition of treasure trove is given by Blackstone (I. Bl. Com., p. 285) where he says:

Treasure trove, called in Latin *thesaurus inventus*, which is where any money or coin, gold, silver, plate, or bullion, is found hidden in the earth, or other private place, the owner thereof being unknown; in which case the treasure belongs to the King, but if he that hid it be known, or afterwards found out, the owner and not the King, is entitled to it. Also if it be found in the sea, or upon the earth, it doth not belong to the King, but the finder, if no owner appears. So that it seems it is the *hiding*, not the *abandoning* of it, that gives the King a property: Bracton defining it, in the words of the civilians, to be *vetus depositio pecunie*. This difference clearly arises from the different intentions which the law implies in the owner. A man, that hides his treasure in a secret place, evidently does not mean to relinquish his property; but reserves a right of claiming it again, when he sees occasion; and, if he dies and the secret also dies with him, the law gives it to the King, in part of his royal revenue. But a man

that scatters his treasure into the sea, or upon the public surface of the earth, is construed to have absolutely abandoned his property and returned it to the common stock, without any intention of reclaiming it; and therefore it belongs, as in a state of nature, to the first occupant, or finder; unless the owner appear and assert his right.

A third definition is given in Chitty on Prerogatives, p. 152:

Treasure trove is where any gold or silver in coin, plate, or bullion, is found concealed in a house, or in the earth, or other private place, the owner thereof being unknown, in which case the treasure belongs to the King or his grantee, having the franchise of treasure trove; but if he that laid it be known or afterwards discovered, the owner and not the King is entitled to it; this prerogative right only applying in the absence of an owner to claim the property. If the owner, instead of hiding the treasure, casually lost it, or purposely parted with it, in such a manner that it is evident he intended to abandon the property altogether, and did not purpose to resume it on another occasion, as if he threw it on the ground, or other public place, or in the sea, the first finder is entitled to the property, as against every one but the owner, and the King's prerogative does not in this respect obtain. So that it is the *hiding*, and not the *abandonment* of the property that entitles the King to it.

From these definitions I deduce that to constitute treasure trove it is essential that:

1. The objects must be *intentionally concealed* in the earth or other private place.
2. Such objects must be either of *gold* or *silver*.
3. The owner, *viz.* the depositor or his legal representative, must be unknown and not ascertainable.
4. The Crown has not parted with its franchise of treasure trove by grant.

Conversely it is also clear that in the following cases the Royal Prerogative of treasure trove does *not* apply:—

1. When the objects are not *intentionally concealed*, *e.g.* a gold or silver ring or coin found alone in a field or river, or a hoard of bullion recovered from beneath the sea, in the bed of a tidal river, or in land below high-water mark.
2. When the objects are not either of *gold* or *silver*, *e.g.* unmounted precious stones, objects of bronze, copper, iron, lead or stone, pottery or glass.
3. When the legal owner of objects of gold or of silver is ascertainable and he makes good his claim.
4. When the Crown has granted to another its franchise of treasure trove.
5. When the objects, although of gold or silver, are laid in a place of sepulture and are adjuncts of an interment.

In reference to the last case, no. 5, it may be of interest to mention that in the 'Irish Gold Ornaments Case'—Attorney-General *v.* the Trustees of the British Museum, Ch. D. 1903. 2—

it was submitted on behalf of the Crown that 'treasure deposited as a votive offering or placed in a grave' should be held to be treasure trove 'because it is treasure which has been concealed'.

The judge said that it was unnecessary for him to decide that point. It is, however, clear to my mind that as votive offerings to a pagan deity would be publicly made and in such a manner as to make the most display possible, and as objects in ancient graves were not placed there secretly or with an intention of reclaiming them, the requirements of our definitions of treasure trove, 'concealment in a secret place' and *animus recuperandi* on the part of the original depositor, are absent and therefore the possibility of such objects being held to be treasure trove is excluded.

I apprehend that objects of this order, of whatever metal or material, are the property of the owner of the soil wherein they are buried, and that the same law of ownership generally applies to all articles not coming within the scope of the legal definitions of treasure trove. It would seem, however, that articles of whatever metal or material found upon the surface of the land, or beneath the sea, or in the bed of a tidal river may be regarded as the lawful property of the finder.

Having now, to some extent, considered what is and what is not 'treasure trove', I will advert to the machinery in use for putting into force the rights of the Crown.

The statute *De Officio Coronatoris*, 4th Edward I (1276), confirmed in part by Section 36 of the Coroners' Act, 1887, enacts that 'A coroner if he be certified by the King's bailiffs or other honest men of the county, shall go to the place where the treasure is said to be found; that he ought to enquire who were the finders and likewise who is suspected thereof, and that may be well perceived where one liveth riotously, haunting taverns, and hath done so of long time; hereupon he may be attached for this suspicion by four, five, or six more pledges if he can be found'.

The Coroners' Act, 1887, merely provides that 'a coroner shall continue as heretofore to have jurisdiction to enquire of treasure that is found, who were the finders and who is suspected thereof'. It is obvious from the wording of the statute, which, dealing with an offence regarded as 'criminal', must be construed strictly, that it is aimed at the actual men who unearth the treasure. As regards any question of title between the Crown and a subject the coroner and his jury have no jurisdiction, as this is confined to an inquiry and verdict as to who were the finders and who were suspected thereof. It is of course open to the owner or holder of articles claimed as treasure trove to

show that they are not such even after an inquiry of the kind above mentioned.

The difficulties of obtaining information and of establishing title, particularly in the case of minor deposits of gold and silver objects, has led the Treasury to adopt methods far removed from legal proceedings, either criminal or civil, to ensure the preservation of objects of general interest coming, or alleged to come, within the definition of treasure trove. The Treasury minute embodying the methods alluded to is contained in a letter circulated by the Secretary of State for the Home Department to the police in or about the year 1886.

The substance of this circular is as follows :

The Lords Commissioners of the Treasury being desirous to render as effective as possible the assistance which is given to the efforts of antiquarian societies for the preservation of objects of general interest, by the assertion of the claim of the Crown to coins and antiquities coming under the description of treasure trove, have reconsidered their practice, as intimated to you in the circular of July 11, 1871, of paying to the finder of articles of treasure trove on behalf of the Crown the *full bullion value* of such articles.

Their Lordships, with a view to encourage the finders of coins and ornaments to notify the fact of their discovery to the Government, are ready to modify their existing regulations, and to return to the finders, who fully and promptly report their discoveries and hand over the same to the authorities, the coins and objects which are not actually required for National Institutions, and the sums received from such Institutions as the *antiquarian value* of such of the coins or objects as are retained and sold to them, subject to the deduction of a percentage at the rate either :

1. Of 20 per cent. from the *antiquarian value* of the coins or objects returned ; or,
2. A sum of 10 per cent. from the *value* of all the objects discovered, as may hereafter be determined.

This arrangement is tentative in character, and the complete right of the Crown, as established by law, to all articles of treasure trove is preserved.

It will be noted that in the above circular no mention is made of the fact that to come, even *prima facie*, within the definition of 'treasure trove', the 'coins, ornaments, or objects' must be of either gold or silver and that such coins, ornaments, or objects, when of another metal or material, or when found singly, or in a place of sepulture, are not the subject of treasure trove. This omission may, perhaps, be excusable having regard to the object which the Lords of the Treasury had in view, and if the circular had been widely made known by sending prints to the clerks of all local municipal bodies and masters of post offices, the secretaries of local antiquarian societies, the keepers of all licensed houses (hotel keepers and publicans), pawnbrokers, and jewellers as well as to the police, much good might have resulted. Prints of the circular might also, with advantage, have been placed on

the doors of all places of public worship, and on the notice boards of post offices, public libraries, and other local institutions, and have been renewed from time to time.

It is also suggested that good may yet be done by teaching, particularly by means of diagrams and charts appealing to the eye of the observer, the children in our public primary and secondary schools what articles found or dug up by men working upon the land are of historical and antiquarian interest and value.

Having now very briefly dealt with the law of treasure trove and the practice of the Treasury in reference to its administration, it may be desirable to make some further suggestions to aid in the preservation of objects of antiquarian interest that may hereafter be discovered. I at one time thought that a carefully considered Act of Parliament might be passed which would have for its object the preservation of all such articles, whether coming within the scope of treasure trove or not, and which would secure to the Government a preferential right of purchase at the *fair* market value. I can, however, clearly see that the rights of landowners and others and the feelings of the private collector would interpose very serious difficulties both to the passing, and, if it were passed, to the successful administration of such an Act. Many of us know that Acts of Parliament are, like pie-crusts, made only to be broken. As stated above, what is chiefly wanted in regard to treasure trove is a wide and proper promulgation of the Treasury's decision in reference to it. To this should be added the establishment of a feeling of confidence that the finders of such articles will in fact receive fair treatment, and that the officials of our national museums will themselves act in the manner which they ask that private individuals should do.

The present method of ascertaining the antiquarian value of treasure trove does not strike the ordinary observer as being calculated to secure fair treatment to the holder thereof, as the purchasers are the sole arbiters as to the price to be paid. The Treasury has to pay, and officials, also paid by the Treasury, fix the price. Moreover, should the officials see the chance of acquiring such articles at a lower, and often totally inadequate price, without putting on the Treasury screw, they will do so with as little hesitation and with the same smug satisfaction as that of the veriest bargain-hunter of us all.

I have, elsewhere, cited specific instances, and could now add many others, but will on this occasion refrain from so doing, in the hope that a wiser consideration of and for the true interests of a wealthy nation may soon induce a sounder and worthier policy. The acquisitive Welshman, the canny Scot, the govern-

ing Irishman, and the enslaved Englishman may each be accredited with a love of fair play, especially when and where his own individual interests and pocket are concerned.

To-day the Crown is not in need of assistance or support from the proceeds of treasure trove, and the main reason for upholding the right avowedly is to preserve gold and silver objects of antiquity from the melting-pot. This being so, why not carry out the object in view in an effective manner? Why let a cheese-paring policy, enforced by and coupled with the spirit and methods of the public informer, permit the continuance of the treatment of the discoverers of articles of treasure trove which was meted out to the besotted tavern-haunting workmen so shrewdly contemplated by the statute of good King Edward the First? Why not, on the other hand, give to such discoverers an interest in the finding and preservation of such articles suitable to what we flatter ourselves is a comparatively enlightened age?

If it were to become generally known that the discoverers of treasure trove would receive proper treatment at the hands of the Treasury, by the institution of an unimpeachable system of fair valuation, there would be little chance of anything of great interest being destroyed by ignorant workmen by reason of the tactless action of uninformed policemen set in motion at the dictates of narrow-minded and short-sighted officials employed by a sometimes close-fisted and penurious Treasury.

Articles of gold and silver are those which, for the reasons indicated, have so often been sacrificed in the melting-pot. That those incapable of replacement have been thus sacrificed is matter for deep but unavailing regret. It rests with us as a society, and with Fellows individually, to assist in the prevention of the recurrence of such regrettable incidents. Much might be accomplished by a generous co-operation with local antiquarian and other kindred societies.

As regards objects of antiquity other than those of gold and silver, the distribution of knowledge in reference to their interest and value is perhaps the best means of ensuring their preservation, whilst the open market for the same affords protection to the owners in regard to price.

In such cases the national museums have either to pay as much as private individuals are willing to expend, or to permit them to be acquired elsewhere.

Many objects of importance are lost to the nation by reason of the smallness of the funds allotted by the Treasury for the purpose of their acquisition, and it is left sometimes to private munificence to supply the lacunae that would otherwise ensue."

Mr. LAWRENCE was glad to hear the paper read to a society which could make effective representations to the authorities on the subject of treasure trove. Fear of unjust treatment often prevented finders from bringing forward gold and silver, and the finder would rather have the value fixed by a dealer than by an amateur. He referred to a find of coins at St. Albans discussed in the *Numismatic Chronicle* of 1886 (3rd ser., vi, 174). The bullion value of a coin or other object, even when increased by so much per cent. for archaeological interest, was often much less than its value in the open market, and thus hindered the operation of the law of treasure trove. Sir John Evans once recommended the suspension of the Treasury minute as to treasure trove, and the offer to finders of the full value of all objects whether treasure trove or not, or (if not wanted for the nation) return of the entire find through the Post Office. These proposals he thought still retained their value, and he hoped the Society would make representations to the Treasury on the lines suggested.

Dr. MARTIN was generally in agreement with the views expressed in the paper, but differed in some particulars. Treasure trove was an exception to the law of first finding; and the author's suggestions had been largely carried out already by the South-eastern Union of Scientific Societies, which had printed posters and circulated them in the home counties, drawing attention to the importance of preserving antiquities. The notices for each district bore the name and address of some well-known resident who would give gratuitous advice when consulted by finders. The first step was to prevent the workman disposing of antiquities for a trifling sum to the first comer; and confidence in the fairness of the authorities had to be restored. If representations to the Treasury were contemplated, he suggested the formation of a small committee to consider the terms of a document which should be drawn up with scrupulous care. A fundamental mistake had been made at the Congress of Archaeological Societies in 1900, when the archaeological value had been confused with the bullion value less a percentage for expenses; and much harm had been done by the resolution then communicated to the Treasury. The Government did not lead public opinion, but allowed things to remain as they were until compelled to take action; for this the apathy displayed by the public was mainly responsible. The law of Scotland claimed not only articles of treasure trove but all articles of antiquity. The circular of 1886 should be exhibited in all public places, but was now out of print and unobtainable. It was an open question whether the law of treasure trove applied to finds in graves and sepulchral

mounds, and a judicial decision alone could decide the point, definitions being here of no assistance. In his opinion the law required amendment, and the Treasury's undertaking to give the antiquarian value less a percentage should be made statutory. At present the Treasury observed no precise rules in such cases. Objects should be valued in the open market, and in case of disagreement arbitration should be invoked. The law of treasure trove seemed the best system, if it were only administered strictly and impartially. At present the finder had no rights whatever, but would be in a better position if the law and the Treasury memorandum were carried into effect. The national museums would also benefit, instead of the private collector, who generally kept what he acquired from the finder of treasure. The loss and destruction of treasure trove was to a large extent due to the greed of the collector.

Mr. ROTH remarked that the landlord or the workman generally claimed any treasure found. The Swedish law regarded the finder as the owner, but compelled him to sell to the Government at the full value less ten per cent. He suggested that the finder should be recognized as the owner till the find was handed over to the Government. He knew of a hoard of sixty-seven gold staters that had not been offered to the British Museum because the finder thought he would get a low price and have to wait for his money.

LORD BALCARRES said that Blackstone's definition, though now alleged to be antiquated, was based on decisions in accordance with the practice of his time. Treasure trove was not defined in any statute, but had to be determined by reference to a number of decisions sometimes contradictory. A ruling case was that of the Irish gold ornaments, in accordance with which the British Museum not only lost the objects but also the purchase-money, which had been paid in open market for the hoard. It was generally held that concealment must be proved in order to establish treasure trove, but in the case referred to the evidence showed almost conclusively that the objects were not hidden; and proof of concealment seemed to be no longer required. He knew of a case in Lancashire that created much distrust of the authorities. Coins to the number of 160 were found and surrendered to the police, but on the refusal of the British Museum to acquire any of them the Chancellor of the Duchy gave the finder a single specimen. Posters would not dispel the idea that the bulk of any valuable find would be taken from the finder. It was notorious that in Ireland and Scotland gold was often melted down and not surrendered to the authorities. Uniformity of

practice was the reform chiefly required; a system should be laid down and worked either directly by the Treasury or through learned societies, who could instruct the public as to the law of treasure trove.

Mr. BRADFORD mentioned as an instance of want of uniformity the clearing of three large sites in Westminster. Within one hoarding were notices to the workmen about treasure trove, but no such warning was given to workmen on the other two sites. Out of 363 coroners' jurisdictions in England and Wales, there had been on an average during the last three years only three inquests per annum on treasure trove.

Mr. KNOWLES referred to the find of gold coins at Corbridge. The labourer who made the discovery was to be rewarded, and it seemed preposterous that a servant of the excavation committee should be rewarded, while his employers were not given possession of the find.

The PRESIDENT had been concerned in a recent action at law on the subject, and had acted as the delegate of the Treasury on several occasions in matters of treasure trove. The Irish gold ornaments case presented all the features necessary for a sound legal decision, but the main point was evaded by the law officers of the Crown, and certain evidence brought before the court was not dealt with. It was certainly a leading case, but had no connexion with ordinary cases of treasure trove. He referred to other communications on the subject published by the Society. In 1892 Sir John Evans dealt with the discovery of a finger-ring in a ploughed field, and quoted the opinions of R. B. Finlay and G. H. Blakesley that hiding with intent to recover was an essential feature of treasure trove. The presidential address of 1887 contained another reference to the subject. Originally this prerogative of the Crown was due to the limited supply of the precious metals, but this plea no longer held good; and in view of the changed conditions, the repeal or amendment of the law was highly desirable. To ascertain the fair market value he had been in the habit of calling in one of the leading dealers, who generally agreed with his own estimate; in exceptional cases he struck an average for the information of the Treasury. The main difficulty was contact with the police, who were obliged to visit the finder; and their mere presence created a disagreeable impression. The collector was always active in complaints against the action of the Treasury or the execution of the law; but seldom took measures to prevent his collection being dispersed at his death and its archaeological value entirely lost. The public good was best served by having

finds of this class accessible to all as soon as the discovery was made.

Mr. CARLYON-BRITTON held that the opinions expressed on the main points of the paper were in accordance with his own. He had purposely avoided any reference to competition between public museums and the private collector, as this might be viewed from different standpoints. He wished above all to see the procedure established on a fair basis, and the law as to treasure trove fully understood by the public. The present want of confidence and annoyance by the local police should be remedied, and the finder given fair value. He had known hundreds of Saxon coins broken up before being handed over to the authorities as mere bullion, and the amount of gold deliberately melted down in Ireland was incredible. The efforts made by the South-eastern Union were most praiseworthy and deserved honourable mention in this connexion. Reform must begin at the top and work downwards, and he looked for an improvement in the attitude of the authorities towards antiquities found in this country. The Society would do well to appoint a small representative committee to consider the matter with a view to action in the near future. The importance of the definitions given by Coke, Blackstone, and Chitty was proved by their citation in the Irish gold ornaments case. He was sure that sepulture was not concealment, there being no intention to recover treasure placed in graves; such finds were therefore outside the scope of treasure trove. The President's method of valuing articles struck him as fair and reasonable, but the same method was not adopted in other departments. He had already dealt with a case of what in his opinion was unfair valuation.¹

REGINALD A. SMITH, Esq., B.A., F.S.A., exhibited a bronze panel of the Viking period from Winchester Cathedral, on which he communicated the following note:

"The lamentable necessity for underpinning Winchester Cathedral has incidentally brought about an interesting discovery which, by permission of the Dean and Chapter and through the kind offices of their architect, Mr. N. C. H. Nisbett, I am able to lay before the Society. A strip of engraved bronze slightly damaged was found near (but perhaps not in association with) a bronze ring at the south-east angle of the south transept, 18 in. below the top of the peat, the peat being 10-12 ft. from the surface. The ring is well made and was probably for harness, being cast with a wavy pattern in a groove round the middle of the outside. The panel (fig. 1) measures 10.8 in. in length, 1.6 in. in breadth, and is about

¹ *British Numismatic Journal*, vol. i (1904), 333.

the thickness of a halfpenny. It has been cleaned and straightened and is now in good enough condition to enable our Fellow Mr. Praetorius to reproduce the design almost entirely. The edges are imperfect in places and there is a crack near one end, but the rivet-holes are mostly perfect and consist of two groups of seven at the end and a single hole at a point which is at once the centre of the panel and of the design. It may have been attached to a book-cover or possibly to a coffin, but no traces of other material were noticed. The front is covered with interlacing scroll-work springing from a cruciform pattern at the centre, and the ground is indicated by closely punched rings. The style is familiar to Scandinavian archaeologists, and is well represented in London by two gravestones,¹ one of which was certainly, and the other probably, found in St. Paul's Churchyard. The former (about A.D. 1030) is now in the Guildhall Museum, and bears a runic inscription stating that Kona raised this stone to Tuki. Round the limbs and body of a stag-like animal are interlacings much in the same style, the small serpentine head which terminates a scroll near the top right-hand corner being perhaps the point of closest resemblance to the Winchester bronze.



Fig. 1. ENGRAVED
BRONZE PANEL, WIN-
CHESTER ($\frac{1}{2}$).

The second London stone, which Bishop Browne of Bristol published in 1885,² is imperfect, but two portions are now mounted together in the British Museum, and show no animal motive at all. What remains of the pattern is purely geometrical, and is still more closely allied to the panel now exhibited. Three points may be noticed in particular, the first and most striking being the cruciform pattern in the centre of both. On the bronze this takes the form of a Greek cross, the curve of the arms being apparently conditioned by the adjoining scrolls; whereas on the stone the cross is of St. Andrew's pattern, and the lobed arms all alike. From between the lobes right and left spring what may be called fleurs-de-

¹ Illustrations and references in *V. C. H. London*, i. 167.

² *Archaeological Journal*, xlii. 251.

lis, a similar device appearing on the stone in the middle of the base-line and again at the top of the bronze panel. This device I will venture to call the union-knot, as its primary purpose was to unite the loose ends of a scroll or interlacing bands. Sometimes it is a mere pear-shaped lobe, as in the upper angles of the Guildhall stone; sometimes it suggests the classical palmette, as on the bronze now exhibited; and its occasional resemblance to the mediaeval fleur-de-lis is merely accidental.

Dr. Sophus Müller's interpretation of this feature is given in his well-known paper on Northern Ornament,¹ from which the following passage is translated: 'In most styles of ornament there is a special detail that serves to link together different parts of the design: everywhere is evident an inclination to unite the elements of which the ornamental style consists, and sometimes the junction is simply linear, sometimes knotted and complicated. In the later (Hiberno-Scandinavian) style, which is marked especially by the use of interlacing bands, the junction takes the form of a noose or slip-knot, which binds the different parts of the design together. This banded knot occurs, so far as is known, in no mediaeval style of ornament that was not influenced by Irish art. Such a noose is seldom met with on Danish or Norwegian antiquities, but is all the more conspicuous in the Hiberno-Swedish group. It passes round the ears and bodies of animals, links bands and lines together, and is, in short, a dominating motive. Nowhere does it occur so often or play so important a part in the decorative scheme as on the Runic gravestones of Sweden. The varied application of the motive shows how essential such a link was to ancient art, and explains why it lasted so long in Christian times on church portals, gravestones, and fonts. And everywhere this peculiar junction agrees so exactly with the Irish motive that hardly any doubt can be entertained as to the Irish origin also of Scandinavian interlacing.'

The Irish origin of this pattern has also been upheld by Dr. Bernhard Salin,² but there is a good deal to be said for another theory that looks to the continental east rather than to the western isle. My colleague Mr. Dalton in 1904 drew attention to oriental elements in the art of western Europe with reference to the Alfred Jewel;³ and the union-knot may belong to that group. The appearance of this feature in Scandinavian art seems a good deal later than the connexion with Ireland which is clear from the remains of the tenth century; and its origin may be sought in another direction. Cufic coins are

¹ *Die Thierornamentik im Norden* (1881), 106-8, figs. 60-2.

² *Antiquarisk Tidskrift för Sverige*, xi, pt. i, 91.

³ *Proceedings*, xx. 76.



Fig. 2. BRONZE PENDANT,
VÄRBY, SWEDEN ($\frac{1}{2}$).



Fig. 3. BRONZE PANEL,
THAMES AT HAMMERSMITH ($\frac{1}{2}$).

common in hoards of metal during the Viking period in Scandinavia, and also occur in this country;¹ and the hoard discovered at Värby (Huddinge, near Stockholm) seems to throw some light on the origin of the union-knot. It consisted of a large circular brooch, two ring-brooches, nineteen mounts of a belt, fourteen pendants (fig. 2), forty-two beads, and six Arabic coins, most of them (including the coins) being gilt. Four of the coins were imitations of Samanid pieces of the tenth century, and two were genuine, struck under Nasr ben Ahmed in Enderaba (916-7) and Ali ben Buwejh in Schiraz (937-8).² In this hoard and another from Näsby (on Lake Mälär) the Arabic coins occur without any European admixture, and many of the objects may be of oriental origin. One oblong mount from Värby is indeed described as Sassanian in character, and is compared with others from the Caucasus and Hungary.

Though formal at the centre, the design of the bronze does not repeat, but near the middle of either half may be noticed a serpentine head terminating a scroll. Round the main stems smaller bands take a single turn and sometimes part into two strands, but constantly end in a curl, as on both the stones already mentioned. The serpentine animal is more in evidence on a bronze panel (fig. 3) found in the Thames at Hammersmith some years ago and now in the national collection. It is perhaps a model gravestone, the plain surface at the base representing the portion of the stone that would be sunk in the ground, and the union-knot

¹ As Cuerdale, Lanes. (*Arch. Journ.*, iv. 200), and Croydon (*V. C. H. Surrey*, i. 273).

² T. J. Arne, *Om de Förutida Södermanland* (1900), 54, 59, figs. 92, 93, 94 (?), 101-8.

being at the top as on the Winchester panel, but pointing in the opposite direction. The Thames panel measures 4·2 in. in length, 1·1 in. in breadth, and is $\frac{1}{4}$ in. thick, with no signs of fastening.

The double interlacing bands, the cruciform centre, and the union-knot are all familiar on the Viking gravestones of Scandinavia, and recent research has done much to clear up the origin and chronology of these motives. Göransson's *Bautil*, published in 1750, contains a large number of Swedish gravestones of this period, but few¹ illustrate the details under discussion, the majority having a scroll of runes with united and ornamented ends. A recent paper² on runic inscriptions that can be dated historically shows the relation between the cruciform ornament and the Christian cross, the example (fig. 4) being assigned to A.D. 1000-1025. Heathen burials ceased in Norway during the first half of the eleventh century, and ornaments in the style of the Winchester bronze are very seldom found in graves, the heathen custom of burying objects with the dead having begun to die out just when this style was introduced.

Dr. Schetelig of Bergen has recently dealt with this subject,³ and traces the artistic development of Scandinavia during the tenth and eleventh centuries. A fixed point to start from is afforded by the famous monument at Jellinge, Denmark,⁴ erected by Harold Blue-tooth to his parents King Gorm and Queen Thyra about 980. He cites as an example of this style the chape found at York and brought before the Society in 1907.⁵ About the year 1000 peculiar band and leaf motives are introduced, and are best exemplified by the Ringerike series of monuments in Buskerud, Norway. The London stones, one animal and the other geometrical, both belong to this style, as does the Winchester bronze, the resemblance of which to the Vang stone (Valders, Norway) is certainly striking (fig. 5). This Ringerike style was displaced about the middle of the eleventh century by animal design in the style of the wooden panels on Urnes church

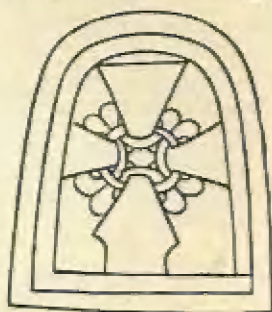


Fig. 4. PANEL FROM GRAVE-STONE, GRINDA, SÖDER-MANLAND.

¹ As no. 232, p. 68, and no. 708, p. 198.

² Otto von Friesen, *Historiska Runinskrifter*, in *Fornvännen*, 1909, 75.

³ *Urnes-Gruppen*, in *Aarsberetningen for 1909 fra Foreningen til Norske Fortidsmindeemærkers Bevaring*.

⁴ Kornerup, *Kongehöiene i Jellinge*.

⁵ *Proceedings*, xxii. 6.

in Sogn, Norway, and also of the gravestones of Uppland, Sweden. After half a century the animal motive, dear to the

Teutonic craftsmen since the Migration period, reasserted its supremacy, and indeed held out in Ireland till the English conquest in the latter half of the twelfth century."



Fig. 5. YANG GRAVESTONE, VALDERS, NORWAY.

The PRESIDENT found the centuries dealt with in the paper a fascinating study: they displayed a virility and originality that did not belong to the more classical periods. One of the finest illuminated MSS. in the world also came from Winchester, and it would be interesting to compare or contrast the illustrations of it in *Archæologia*¹ with the bronze panel recently found there. The Viking ornament had its origin in the East, and the style was transmitted right across Europe, whereas the Winchester school of illumination displayed infinitely more of the classical spirit.

Mr. CRACE inquired the origin of the pattern which, instead of starting at the end of the panel, branched off on either side of a geometrical device at the centre. The arrangement was foreign to European art of that period, and reminded him rather of the Italian Renaissance.

Mr. SMITH replied that the peculiar style of the panel was in itself good evidence of non-European origin, and the virtual suppression of animal forms suggested a connexion with some Muhammadan centre, which was more clearly indicated by coins found in some quantity with Viking works of art.

Thanks were ordered to be returned for these communications.

¹ Vol. xxiv, plates i-xxxii.

THURSDAY, 23rd MARCH, 1911.

CHARLES HERCULES READ, Esq., LL.D., President,
in the Chair.

The following gifts were announced, and thanks for the same ordered to be returned to the donors :

From His Grace the Duke of Devonshire :—The Benedictional of Saint Ethelwold, Bishop of Winchester 963-984. Reproduced in facsimile from the manuscript in the library of the Duke of Devonshire at Chatsworth. Edited by G. F. Warner and H. A. Wilson. fol. Oxford, 1910.

From the Author :—A guide to the museum of Roman remains at Cirencester. By Sir Arthur H. Church, K.C.V.O., F.R.S. Tenth edition. 8vo. Cirencester, 1910.

From G. N. Rushforth, Esq., F.S.A. :—Le Château Saint-Auge. Par E. Rodocanachi. 4to. Paris, 1909.

A special vote of thanks was returned to the Duke of Devonshire for his gift to the Library.

H. H. E. Craster, Esq., M.A., was admitted a Fellow.

H. E. BALCH, Esq., read a paper by himself and Mr. R. D. R. Troup on the Exploration of a Late-Celtic and Romano-British Cave-dwelling at Wookey Hole.

It has been demonstrated that the entrance gallery of the great cave at Wookey Hole (through which flows the subterranean River Axe, and which is removed only by the width of the ravine from the Hyaena Den, explored by Professor Boyd Dawkins fifty years ago) was in use as a cave-dwelling for an extended period before and during the Roman occupation. The removal of an insignificant deposit of superficial material disclosed floor refuse of Roman age, which has been found to extend to an average depth of six inches, and to contain all the usual types of pottery, pins, needles, articles of bone and bronze, human remains, and coins ranging from Vespasian to Valentinian II. Some eighty coins are included in the list, and they cover practically the whole period. Below this, and definitely separated from it by a marked change in the character of the material, is an important deposit in which is to be found no trace of Roman influence, save that one silver coin of Marcia. 124-103 B.C., occurred near the top. Throughout the whole

depth of the excavation, relics of the domestic life of the cave inhabitants have occurred, exhibiting decorative art in pottery and in bone. Combs formed of antler and of bone, including a massive comb of Scotch type, and another shaped as the human hand, a beautiful shuttle(?), polished and decorated with circles in groups of seven, fine bands of bone riveted for encircling some fragile vessel, a curious implement for making three-ply cord, antler picks, antler cheek-pieces, and a variety of pottery implements are among the finds. Here also occurred a silver ear-ring accompanying the left frontal bone of a girl, which, the only trace of this skeleton, lay in the ash of a fire; an ornament of bronze leaves, brooches, including a small specimen of late La Tène type, a bronze chain composed of thirteen S-shaped links with traces of decoration, and one bronze penannular brooch. Similar brooches in iron occurred in the upper deposits. A very large series of iron articles was found. A spear and various arrow-heads, a currency-bar of supposed new weight, with parts of others; tethering rings, knives, a latch-lifter or key, a socketed bill-hook exactly resembling those found in the lake-village near Glastonbury, a large chopper or knife of triangular form, a sickle, chisels, gouges, a large assortment of nails, and a dagger with bronze mount, are reported. There are a variety of pins and needles and awls, some of which still bear traces of wooden handles. A considerable number of spindle-whorls and allied objects occurred throughout the workings, and these exhibit a definite advance in form and workmanship. A metal ingot and articles cast in the same substance have been proved to be an alloy of tin and lead. Quernstones of Old Red Conglomerate, and a saddle quern with its rubber, were found; also a stone lamp formed of Oolite. Whetstones and honestones, and a large ball formed of stalagmite, are also among the finds. A vessel of curious interest is represented by fragments of an urn bearing inpricked markings in definite groups, which, from their regularity and consistent repetition, he suggested were akin to Ogam. Bowls of wood, together with a spade of the same material, occurred in the rubbish of a goat's stable. Charred grain and pulse, together with burnt acorns, throw light upon the limited agriculture of the period, and these have been examined by Mr. Clement Reid of the Geological Survey. The bird remains have been examined and reported upon by Mr. E. T. Reid, late of the Geological Survey. Remains of domestic and wild animals have been found, as also marine and land molluscs. The human remains present a problem, and it is practically certain that the persistent occurrence of these along with waste food bones indicates cannibalism. The work is not yet completed.

Prof. BOYD DAWKINS was much gratified to see cave-hunting carried on with such success in a district with which he had been familiar for many years. At Wookey Hole he had neglected remains of the Iron Age and Roman period, being in search of something considerably older; but nothing had been lost by the delay, as the cave could not have been more carefully investigated than it had been by the authors of the paper. The main interest of these discoveries lay in their relation to the Glastonbury lake-village and the two others now being excavated by a committee, of which the President and himself were members. The Late-Celtic culture here was practically the same as at Glastonbury, but the Wookey Hole occupants were of inferior type and not so well endowed as the lake-villagers. They had no beautiful bronzes and no glass such as Glastonbury produced, but seemed to have been contemporaries. The human remains were so fragmentary that nothing definite could be said about them. They belonged to a race innocent of boots or shoes, the carination of the femur (due to free action of the toes) being well marked. The tibia gave a similar result, being platycnemic. The skulls might not belong to the same tribe or group of cave-dwellers: one was a woman's and belonged to the round-headed series, which arrived much later than the long-heads. The other was an oval skull, to some extent resembling those at Glastonbury, but rounded at the back like the short-heads, and possibly a hybrid. He wished all success to the excavators in their further investigation of the cave, and assured them of the sympathy of the Society.

Prof. GOWLAND congratulated the authors on their good fortune, as the cave had never been excavated before and they had a virgin site. The metal objects interested him most, and the silver ear-ring was of considerable importance, that metal being rarely used in Britain before the Roman period. The bronze chain was certainly Roman, the metal containing the usual 12 per cent. of tin. He awaited the final analysis of the alloy of tin and lead, but unfortunately there was little sound metal left to analyse in the specimen. The 33 and 38 per cent. did not represent the original composition of the metal, because when an alloy of tin and lead underwent weathering, the carbonate of lead formed was soluble in water, but the oxide of tin was insoluble. In a damp place the lead would be washed away and leave a relatively higher proportion of tin. The alloy was certainly not pewter, being deficient in tin, but approached to solder. The crucible was of the right shape for the period, but had never been used, no vesicular bubbles being visible on the surface. He was anxious to know if the true floor of the cave

had been reached, as an earlier occupation than that indicated by the finds was practically certain. The excavation should be continued till the bed-rock was reached.

The PRESIDENT said the Society was indebted to the authors for bringing their results before the meeting, and regretted that there was no time for a fuller discussion of the paper. He thought the special interest of the cave was the clear demarcation of the upper and lower layers of deposit. Nothing of the Bronze period had been so far discovered, and the latest layer was obviously Roman, so the period of occupation was limited in both directions. Prof. Boyd Dawkins was no doubt correct in distinguishing between the poor dwellers in this cavern and the luxurious inhabitants of the Glastonbury lake-village, which was probably the metropolis of that region.

Messrs. Balch and Troup's paper will be printed in *Archaeologia*.

E. THURLOW LEEDS, Esq., B.A., F.S.A., exhibited a Romano-Celtic brooch of the second century, from Hook Norton, Oxfordshire, on which he communicated the following note:

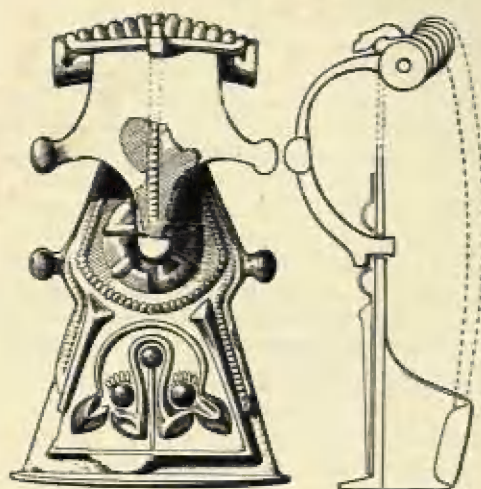
"It is by kind permission of the Rev. E. C. Freeman, Rector of Hook Norton, that I am enabled to exhibit this fibula. It came to light, along with other objects, in the course of one of the numerous excavations for iron-stone round the village. The circumstances of the discovery are not quite clear, but it appears that the objects were all found in a field which goes by the name of 'Goosacre'. Mr. Freeman informs me that, from what he has been able to gather, a skeleton was found in a jar. This I take to be a cremation burial, but it is not quite certain that all the objects belonged to this burial.

The most interesting object is undoubtedly the fibula. It belongs to a rare class of fibulae, the finest representative of which is that from Aesica described by Dr. Arthur J. Evans.¹ Other examples resembling more nearly the Hook Norton specimen are described and figured by the Rev. E. H. Goddard in vol. xxxv of the *Wiltshire Archaeological and Natural History Magazine*, p. 404, and figs. 23 and 24. The latter is from Wylve Camp, near Salisbury, and is now in the Blackmore Museum. The former, found at Winterbourne Bassett (now in the Devizes Museum), affords a very close parallel to the Hook Norton fibula, but fortunately the ornamentation on this latter example is much better preserved. Its Late-Celtic character is

¹ *Archaeologia*, 1v. 179.

self-evident; a noteworthy feature is its arrangement in the form of an animal's head. The ornament is in all cases executed in repoussé work on thin plates applied to the surface of the fibula.¹

Mr. Goddard has drawn attention to a plain fibula of similar form from Water Eaton, Oxon. (more probably from the Roman station at Woodeaton on the hill on the opposite side of the river).



ROMANO-CELTIC BROOCH FROM HOOK NORTON, OXFORDSHIRE (†).

Dr. A. J. Evans has dated the Aesica fibula about A.D. 200, and as the smaller examples have been evolved from similar types they must belong to the same period.

A bowl, also found, is probably a native imitation of 'Samian' ware, *i.e.* a reddish ware with a slight burnish. Other fragments of similar ware were found; also some pieces of a hand-made pot of plain and coarse dark brown ware.

The remaining objects consist of a small double ring of iron, a small bronze scarifier, and the spring of another fibula."²

Thanks were ordered to be returned for these communications.

¹ Compare also the specimen from Tre'r Ceiri, Yr Eifl, Carnarvon, *Arch. Camb.*, 6th series, iv. p. 9.

² Since this communication was made to the Society the fibula and other objects in metal have been deposited on loan in the Ashmolean Museum, Oxford.

THURSDAY, 30th MARCH, 1911.

SIR EDWARD WILLIAM BRABROOK, C.B., Director,
in the Chair.

The following gifts were announced, and thanks for the same ordered to be returned to the donors :

From J. Challenor C. Smith, Esq., F.S.A. :—A calendar of grants of probate and administration and of other testamentary records of the Commissary Court of the Dean and Chapter of Westminster, 1508 to 1857-8. fol. London, 1864.

From D. H. Montgomerie, Esq., F.S.A. :—City and County of Norwich. Report of the City Committee as to the City Wall, 15 March, 1910. 8vo. Norwich, 1911.

From the Author :—Some origins and survivals. By N. G. Munro, M.D. 8vo. Yokohama, Japan, 1911.

From Rev. R. B. Gardiner, M.A., F.S.A. :—*Res Paulinae*. The eighth half-century of St. Paul's School. Edited by Rev. R. B. Gardiner and John Lupton. 8vo. West Kensington, 1911.

From the Right Hon. the Earl of Crawford, K.T., F.S.A. :—*Bibliotheca Lindesiana*. Vol. VII. A bibliography of the literature of philately. fol. Aberdeen, 1911.

From the Trustees of the British Museum :

1. Coins of the Roman Republic in the British Museum. By H. A. Grueber, F.S.A. 3 vols. 8vo. London, 1910.
2. Catalogue of romances in the Department of MSS. in the British Museum. Vol. III. By J. A. Herbert. 8vo. London, 1910.
3. Catalogue of the Greek coins of Phoenicia. By G. F. Hill. 8vo. London, 1910.
4. Greek papyri in the British Museum. Catalogue, with texts. Vol. IV. The Aphroditon papyri. Edited by H. I. Bell. With an appendix of Coptic papyri. Edited by W. E. Crum. 4to. London, 1910.
5. A supplementary catalogue of Bengali books in the library of the British Museum acquired during the years 1886-1910. Compiled by J. F. Blumhardt. 4to. London, 1910.
6. A catalogue of the Kannada, Badaga, and Kung books in the library of the British Museum. Compiled by L. D. Barnett. 4to. London, 1910.

From Harold Sands, Esq., F.S.A. :—Some account of Sheriff-Hutton Castle. By George Todd. 8vo. York, 1824.

Also three lantern slides of plans of Roman remains at Silchester and Caerwent.

A special vote of thanks was returned to Mr. Challenor Smith for his gift to the Library.

Hardy Bertram McCall, Esq., M.A., was admitted a Fellow.

WILLIAM DALE, Esq., F.S.A., read the following report as Local Secretary for Hampshire:

"Taking my exhibits in the order of their age, I would first call attention to a fine palaeolithic implement of the long

*a**b*

PALAEOLITHIC IMPLEMENT FROM SHIRLEY (*a*) AND NEOLITHIC CELT
FROM SHOLING (*b*). ($\frac{1}{2}$)

pointed form, which I thought was worthy of being shown in these rooms. Palaeoliths with the butt end left untrimmed are not uncommon, and are a part of the evidence that implements of this age were not hafted in any way. The one shown was found at Shirley, about a mile out of Southampton. It bears a remote resemblance to a dagger, and is slightly suggestive of

some of the earlier forms of the age of bronze. The spur worked near the handle is specially noticeable. At the same time I am not bold enough to hazard any theory of the evolution of bronze daggers from palaeolithic implements. It is a most convenient hand weapon for hands the size of our own, and bears out the most recent pronouncement respecting the proportions of palaeolithic man. The 'Galley Hill' man, for whom the mature age of 170,000 years is claimed, is said to bear a close resemblance to ourselves.

In the early part of this year some workmen employed at a gravel-pit at Sholing discovered the neolithic celt I also show. Within a few hundred yards, at the bottom of the valley, was found some years ago a very early flat bronze celt which has been shown in these rooms.¹ This flint celt was found at the base of two feet of earth lying just where the gravel begins, and thanks to the workmen having an eye for palaeoliths it did not escape their notice. It is a beautiful piece of workmanship, and can only be regarded as a polished celt arrested in the making. It has never been used, nor was it intended to be used in its present condition. For this reason it is rare. Chipped celts are common enough, but they are not like this. One end is usually left rough—often triangular, and they are not often symmetrical. When one remembers that a polished celt often has nearly every sign of chipping rubbed out, great pains must have been taken with the preliminary shaping, and this specimen is a good illustration of this kind of workmanship.

On each side of the banks of the river Itchen, from Clausentum to Wood Mill, specimens of the pottery associated with the New Forest are constantly being found. I feel sure that somewhere here was a pottery, though I have not been able to locate it. The specimens on the table come from St. Denys and are scattered finds buried in the soil. Being small and shapely, these vessels when found are difficult to obtain, and the workmen who find them do not readily give them up. The local pottery, if it did exist, seems likely to have been near Wood Mill. There is a tradition of a great find of crocks and vessels here in the seventies. A correspondent in the *Hampshire Antiquary and Naturalist* for 1890² recorded his conversation with a workman as to this find, which it appears was made in widening the South Western Railway. The man said that some one came and took away a cab load of crocks, while some of the pots went to the Dorchester Museum and others to Salisbury Museum. I have not been able to go to Dorchester, but on paying a visit to Salisbury I found a little assemblage of vessels on a shelf by themselves below the Fordingbridge find. The provenance of

¹ *Proceedings*, xvii, p. 131.

² Vol. i, p. 48.

these does not appear to be known, but I have very little doubt they are part of the find on the banks of the Itchen.

The large jug here exhibited was dredged from the Itchen at the ancient Cross-house Ferry. I take it to be not older than the sixteenth century. The hole in the handle communicates with the inside. I cannot make it act as a puzzle jug, so suppose the hole was used for the purpose of imbibing.

In a recent paper by Mr. Kitson Clark,¹ mention was made of the ancient parallel trackways which are found on the chalk hills and in other places where they have escaped destruction. No better examples can be found anywhere than on the high ground three miles east of Winchester on the road to Petersfield. These are so remarkable that they are constantly being taken for defensive earthworks. The modern road takes a sharp curve to avoid them, and it is evident that when wheel traffic began to develop they were already ancient and a sufficiently serious obstruction to prevent the road being carried through them. Walkelin, the bishop in the days of William the Conqueror, must have come along these tracks from his residence at Beauworth.

Another class of earthwork, non-defensive, are the lynchets or terraces of ancient cultivation. These, unfortunately, are rapidly disappearing, and it is a pity protection cannot be afforded them.

Although out of my district, I ask your permission to call attention to the Longstone in the Isle of Wight, the only megalithic monument in our county. At present it consists of but one upright stone, nearly 12 ft. high, but the prostrate stone by its side suggests that the monument was originally a dolmen. This does not appear to have occurred to Sir Henry Englefield in 1816, but Adams, writing in 1856, propounds the theory, and mentions a third stone, 4 ft. 2 in. long, a few hundred yards off at the bottom of the slope, which he thought might be the top stone. This third stone I saw only a few years ago, and thought it hardly large enough for a top stone, although it could have served that purpose. It has now been broken up to mend the road, by the side of which it lay. The Longstone itself has no protection whatever, and is a favourite rubbing post for the cows of the neighbourhood. Adams says that in 1850 some one started to excavate at the base of the upright stone to see how deep it was in the ground. They got down 2 ft., and were then deterred by the difficulty of the work.

Lastly I would draw attention to two little-known portions of the walls of Southampton. At the north-east corner stands the Polymond Tower, named after John de Polymond, ten times mayor in the reigns of Edward III and Richard II, the upkeep

¹ See above, p. 309.

of which was assigned to the canons of the Priory of St. Denys. In 1828 orders were given for its destruction; but the job proved a tough one, and the upper story only went. What remains is entirely closed in by gardens and stable yards, and its very existence is only known to a few.

At the south-east corner of the walls stands the south-eastern or God's-house tower which is connected with the God's-house gate by a gallery. This tower dates only from the fifteenth century, and is a spur work built to protect the sluices of the moat. Views from the sea front are well known from ancient prints. At the back is a large area bounded by a considerable portion of the east wall as far as a drum tower, and at the south by the back of the tower and gallery. This, until lately, was used as a wood yard, and piles of timber were stacked against the tower. This is now all removed, and I, at once, took the opportunity to have the tower photographed from the back; I also made a representation to the Mayor and Corporation asking for the open space to be preserved as a garden, and the moat cleaned out and turfed, but was not successful.

I am, however, thankful to record that the Corporation have decided to acquire the Tudor house, which is largely owing to the resolution this Society passed and transmitted at my instigation."¹

Sir WYNDHAM PORTAL had supported Mr. Dale in his attempt to secure the waste land adjoining St. Julian's Church as a garden; but the price was prohibitive, and the vendors showed no inclination to come to terms. The church and old almshouses had suffered in 1866 when the workhouse was pulled down and rebuilt. It was interesting to know that the French refugees had passed through the archway to service in the little church since the days of Elizabeth. Mr. Dale had helped to save the Tudor house at Southampton, and a recent effort to rescind the resolution of the Council had been unsuccessful.

V. B. CROWTHER-BEYNON, Esq., M.A., F.S.A., communicated some notes on recent finds, chiefly of the Anglo-Saxon period, at Market Overton, Rutland.

The ironstone diggings, which were begun at Market Overton in 1906, have brought to light what are unmistakably two distinct Saxon burial grounds, separated by a considerable interval. Both have yielded interesting series of relics. The finds in the north cemetery were exhibited and described before a meeting of the Society of Antiquaries in January, 1908.² The present paper

¹ See above, p. 337.

² *Proceedings*, vol. xxii, pp. 48-53.

deals with the discoveries in the south cemetery during 1909-10. No excavation on scientific principles has been found to be possible, the result being that the objects cannot be collected into grave groups, and thus are not as interesting or instructive as might have been the case under more favourable conditions, since the methods employed for obtaining the ironstone are fatal to any good scientific results.

Among the most striking finds in the collection now exhibited are: a gold bracteate in very perfect condition, displaying a riderless horse and a bird; a gold bead; a gold spiral expanding finger-ring; a silver torc; three pairs of silver hook-and-eye



HOOP OF BRONZE BUCKLE FROM MARKET OVERTON (†).

clasps, two of these having flattened centres of a type (it is believed) not recorded before; and a silver brooch of the 'radiated' type, with an oval foot, and decorated with animal patterns. The bronze brooches include four good examples of the 'square-headed' type (one having a border or frame of silver wire, a feature also believed to be unique), and three of the 'cruciform' type. There are examples of the 'applied' circular brooch, the 'saucer', and some twenty specimens of annular brooches of various forms, as well as many smaller objects of bronze. Beads are represented by a collection considerable both in number and variety. The finds also include thirty iron spear-heads and twenty-five pots and urns of different types.

The objects which can be assigned to the Roman period have not been very numerous or unusual, with the exception of some pieces of pottery decorated with a peculiar phallic pattern not previously met with in the district, though somewhat similar decoration is recorded from Corbridge.

A few other finds are included in the collection, among them part of a gypcière handle with an unusual motto in niello, and a leaden spindle-whorl of a type¹ generally assigned to the Roman period, the property of Major Wingfield. There was also exhibited, through the kindness of Mr. J. A. Nowers, an enamelled Roman brooch in the form of a horse, found at Water

¹ *Archaeological Journal*, xxiv. 81.

Newton, Hunts.; and the hoop of a bronze buckle (fig.) with projecting horses' heads, found at Alwalton, Hunts., and resembling a specimen in the Peterborough Museum (Artis collection).

MR. REGINALD SMITH mentioned another example of the rare foreign type of brooch with oval foot, in Canterbury Museum; the head was of oblong form and the place of discovery unknown, but both had no doubt been introduced from South Germany. Annular brooches were specially abundant in the East Riding of Yorkshire, and seemed to be later than the true radiated brooch which lacked the animal ornament frequently seen on the square-headed type. The hook-and-eye showed an unusual treatment of the spiral coil of wire: close parallels were to be found in certain Bronze Age brooches of Scandinavia and Iron Age examples in Italy, which had the coil beaten out into a plate for engraved decoration. The buckle with horses' heads projecting from the hoop closely resembled one found on the same site as Early British bronzes at Stanwick, North Riding of Yorkshire, and was still attached to a plate engraved with two peacocks and the sacred tree.¹ The peacock was a common motive after the age of Constantine, and the early fifth century is suggested by the debased lions' heads that formed part of the hoop on both examples, much like a specimen from an Anglo-Saxon cemetery at Mitcham, Surrey.² Horses' heads projecting from the ends of combs occurred about the same time, and it was possible that the Stanwick buckle was not contemporary with the Late-Celtic finds from Stanwick. The ring-dial was in use from the sixteenth century till about 1800, and the specimen exhibited was of common type, probably of the eighteenth century. The steel band that originally moved in the groove round the outside was missing: in it was the hole through which the sun shone, marking the hour on the inside of the ring, the hole being first brought into position according to the date.³

E. THURLOW LEEDS, Esq., F.S.A., read some notes on the gold bracteate and other ornaments discovered by Mr. Crowther-Beynon.

Messrs. Crowther-Beynon's and Leeds' papers will be printed in *Archaeologia*.

Thanks were ordered to be returned for these communications.

¹ *Early Iron Age Guide* (Brit. Mus.), 135, fig. 121. Others are in the Ashmolean Museum (from Dyke Hills, Dorchester) and in the Périgueux Museum, France.

² *Proceedings*, xxi. 8, fig. 8; a chain of bar-links similar to that from Market Overton is figured from the same cemetery in *Archaeologia*, lx. 56.

³ A description is given in *Proceedings*, xv. 82.

THURSDAY, 6th APRIL, 1911.

CHARLES HERCULES READ, Esq., LL.D., President,
in the Chair.

Notice was given of the Anniversary Meeting on Thursday, 27th April, at 2 p.m., and lists were read of the Fellows proposed as President, Council, and Officers for the ensuing year.

The Report of the Auditors (see pp. 416-21) was read, and thanks were ordered to be returned to the Auditors for their trouble and to the Treasurer for his good and faithful services.

EDWARD PRIOLEAU WARREN, Esq., F.S.A., exhibited a chest from St. Sannan's Church, Bedwellty, Monmouthshire, and communicated the following notes:

"The oak chest or press exhibited has, as far as can be ascertained, always stood in its accustomed place on the north side of the chancel of the church, and close to the east wall. Its position and character point to its ancient use as an aumbry rather than a parish chest.

It is an interesting example of joinery and carving, of very late fifteenth-century type. It is at once obvious that it has undergone some alteration, by the unfortunate removal of the centre panels, or door, of the front, which were probably of the traceried or 'window-pattern' form of the remaining front panels, and the insertion of a relatively modern door. This looks like a late seventeenth-century alteration.

It will be noticed that, in its present form, it has carved panels on one end only, i.e. that presented to view from the west. The opposite end is always hidden by its position close against the eastern wall, and has plain panels. This arrangement seems to confirm the view of its use as an aumbry in its usual place.

The carvings of these western panels, which are naïvely and vigorously executed, much resemble in character similar work to be found in the neighbouring districts of Gloucestershire and Somerset, and represent, in the upper panels, the Five Wounds, hands, feet, and heart, encircled by the typical flat wreath or crown of thorns, with disconnected leaf spandrels to fill the corners. The lower panel bears the three nails upon a shield encircled by a conventional wreath or stem enwrapped by a scroll or ribband, the corners filled out with leaf spandrels. The spaces inside the wreath circles, at the sides of the shield, are occupied by, on the left, the reed and sponge and the spear, on the right, a scourge

SOCIETY OF ANTIQUARIES OF LONDON.

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDING 31st DECEMBER, 1910.

INCOME.			EXPENDITURE.		
	£	s. d.		£	s. d.
Subscriptions received unpaid, 31st December, 1910	1879	10 0	By Publications of the Society : Printers' and Artists' Charges and Binding	57	19 10
Composition	36	15 0	Library : Binding	95	11 6
Admissions	55	0 0	Subject Index	133	10 9
Dividends : £10683 19s. 7d. Metropolitan 3 per cent. Stock	299	0 0	Books purchased	50	19 0
£1010 1s. 0d. Metropolitan Water Board 3 per cent. "B" Stock	28	10 8	Subscriptions to Books and Societies		
Works sold	327	10 8	Research Fund : Proportion of Admission Fees	40	13 9
Stevenson Request	379	0 2	House Expenditure : Insurance	103	19 4
Sundry Receipts	620	15 10	Lighting	33	15 0
Balance carried to Balance Sheet	93	15 6	Fuel	49	7 0
	96	19 8	Repairs	25	12 6
			Tea at Meetings	58	7 7
			Cleaning and Sundries		
			Income Tax and Inland Revenue Licence		
			Legacy Duty and Costs : Stevenson Request		
			Retiring Allowance : W. H. St. John Hope. One Quarter.	50	0 0
			Salaries, &c. : Secretary, Allowance		
			Assistant Secretary, W. H. St. John Hope. Three Quarters	300	0 0
			Do., H. S. Kingsford. One Quarter	62	10 0
			Clerk and Librarian	250	0 0
			Wages and Allowances : Porter, Housemaid, and Hall Boy	160	15 7
			Official Expenditure : Stationery and Printing	9	16 8
			Postage	20	8 0
			" and Carriage on Publications	97	19 6
			Alabaster Exhibition	168	0 3
			Sundry Expenses		
				457	0 0
				£3768	6 10

	£	s.	d.	£	s.	d.	£	s.	d.
To Sundry Creditors . . . . .	.	.	.	532	4	8			
„ Unexpended balances : . . . .	.	.	.			
Owen Fund	29	12	11				11060	5	2
Research Fund	105	9	9				7162	6	4
				195	2	8			
„ Balance, 31st December, 1909	306	77	3	5			3692	7	6
Less Balance of Income and Expenditure									
Account year ending 31st December, 1910	96	19	8				3763	6	1
				30580	3	9	3741	3	1
							494	11	3
							1000	0	0
							30913	19	5
„ Sundry Debtors . . . . .	.	.	.				66	15	1
„ Subscriptions unpaid . . . . .	.	.	.				30	15	0
„ Cash :									
At Bankers, Messrs. Coutts & Co. . . . .	.	.	.				286	9	8
In hand . . . . .	.	.	.				3	11	11
							290	1	7
							£31307	11	1

We have prepared the above Balance Sheet and Income and Expenditure Account from the Books and Statements provided by the Treasurer of the Society, and certify to the accuracy of the same. The Investments, which have been, as before, taken at Stock Exchange List prices, on the 30th December, 1899, with the exception of the Metropolitan Water Board 3 per cent. "B" Stock, which was purchased in 1905, and is at cost price, do not include those belonging to the Research and Owen Funds. No account has been taken of the Books, Furniture, Antiquities, or other Assets of the Society.

36 Walbrook, London, E.C.
22nd March, 1911.

C. F. KEMP, SONS, & CO.

We, the AUDITORS appointed to audit the ACCOUNTS of the SOCIETY to the 31st day of December, 1910, having examined the find the same to be accurate.

CASH ACCOUNT FOR THE YEAR

		RECEIPTS.					
1910.					£	s.	d.
Balance in hand, 31st December, 1909						93	10 4
Annual Subscriptions:							
11 at £3 3s., arrears due 1909					34	13	0
4 at £2 2s., ditto					8	8	0
542 at £3 3s., due 1st January, 1910					1707	6	0
78 at £2 2s., ditto					163	16	0
						1914	3 0
Admissions:							
26 Fellows at £10 10s.						273	0 0
Composition:							
1 Fellow at £55						55	0 0
Dividends:							
on £10583 19s. 7d. Metropolitan 3 per cent. Stock					299	0	0
on £1010 1s. Metropolitan Water Board 3 per cent. "B" Stock					28	10	8
						327	10 8
Works sold.						529	13 11
Stevenson Bequest:							
Dividend on Bank Stock and other Investments						565	12 0
Owen Fund:							
Dividend on £300 2½ per cent. Annuities						7	1 4
Sundry Receipts						97	19 0

£3863 11 0

OF ANTIQUARIES OF LONDON, from the 1st day of January, 1910,
underwritten ACCOUNTS with the Vouchers relating thereto, do

ENDING 31ST DECEMBER, 1910.

		PAYMENTS.			
1910.		£	s.	d.	£ s. d.
Publications of the Society :					
	Printers' and Artists' Charges and Binding .				1605 12 6
Library :					
	Binding	57	19	10	
	Subject Index	95	11	6	
	Books purchased	132	2	11	
	Subscriptions to Books and Societies	50	19	0	
					336 13 3
Research Fund :					
	Proportion of Admission Fees				54 12 0
House Expenditure :					
	Insurance	40	13	9	
	Lighting	117	8	7	
	Fuel	30	12	0	
	Repairs	50	13	0	
	Tea at Meetings	25	12	6	
	Cleaning and Sundries	57	16	1	
					322 15 11
	Income Tax and Inland Revenue Licence				19 0 3
	Legacy Duty and Costs : Stevenson Bequest				15 15 0
	Retiring Allowance. W. H. St. John Hope. One Quarter				62 10 0
Salaries, &c. :					
	Secretary, Allowance	50	0	0	
	Assistant Secretary, W. H. St. John Hope. Three Quarters	300	0	0	
	Do., H. S. Kingsford. One Quarter	62	10	0	
	Clerk and Librarian	250	0	0	
					662 10 0
Wages and Allowances :					
	Porter, Housemaid, and Hall Boy				205 2 0
Official Expenditure :					
	Stationery and Printing	159	19	10	
	Postage	9	16	8	
	Ditto and Carriage on Publications	20	8	0	
	Alabaster Exhibition	97	19	6	
	Sundry Expenses	166	4	3	
					454 8 3
Cash :					
	At Messrs. Coutts & Co.	120	19	11	
	Petty Cash	3	11	11	
					124 11 10
					£3863 11 0

RECEIPTS.		RESEARCH FUND			
		£	s.	d.	£ s. d.
Balance in hand, 31st December, 1909					80 15 10
General Account :					
Proportion of Admission Fees		54	12	0	
Balance Anniversary Dinner		6	6	0	
					60 18 0
Subscriptions					57 15 0
Donations					99 3 0
Dividends :					
12 months' Dividend on :					
£1805 13s. 4d. India 3½ per cent. Stock		59	10	0	
£500 J. Dickinson & Company Ltd. 5 per cent. Preference Stock		23	10	10	
£527 13s. 0d. Victoria Government 3 per cent. Stock		14	18	2	
6 months' Dividend on :					
£613 13s. 3d. Metropolitan Water Board 3 per cent. "B" Stock		8	13	5	
£727 9s. 3d. do. do. do.		10	5	6	
					116 17 11
Legacy. F. G. Hilton Price, deceased					100 0 0
					£515 9 9

STOCKS AND INVESTMENTS

	Amount of Stock.	Value at 31st December, 1910.
	£ s. d.	£ s. d.
Metropolitan 3 per cent. Stock	10583 19 7	9631 8 4
Bank Stock	2128 0 6	5395 13 8
Great Northern Railway Consolidated 4 per cent. Perpetual Preference Stock	2725 0 0	2915 15 0
London and North Western Railway 4 per cent. Guaranteed Stock	2757 0 0	3005 2 7
North Eastern Railway 4 per cent. Guaranteed Stock	2761 0 0	2981 17 7
Midland Railway 2½ per cent. Consolidated Perpetual Preference Stock	592 5 10	402 15 1
Metropolitan Water Board 3 per cent. "B" Stock	1010 1 0	863 11 11
	£22557 15 11	£25196 4 2

OWEN FUND.

2½ per cent. Annuities	300 0 0	232 10 0
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RESEARCH FUND.

India 3½ per cent. Stock	1805 13 4	1715 7 8
J. Dickinson & Co., Limited, 5 per cent. Preference Stock	500 0 0	515 0 0
Victoria Government 3 per cent. Consolidated Inscribed Stock	527 13 0	443 4 6
Metropolitan Water Board 3 per cent. "B" Stock	727 9 3	621 19 7
	£3560 15 7	£3295 11 9

ACCOUNT.

	PAYMENTS.	£	s.	d.
Silechester Excavation Fund		30	0	0
Excavations at Lesnes Abbey		5	0	0
Bardney Abbey Excavation Fund		5	0	0
Pevensey Excavation Fund		10	0	0
Red Hills Excavation Fund		10	0	0
Malmesbury Abbey Excavations		5	0	0
Caerwent Exploration Fund		15	0	0
Old Sarum Excavation Fund		150	0	0
Corbridge Excavation Fund		20	0	0
Metropolitan Water Board 3 per cent. "B" Stock, Purchase of £113 16s. 6d. Stock		100	0	0
Balance, 31st December, 1910		165	9	9

£515 9 9

31st DECEMBER, 1910.

Amount
of Stock.
£ s. d.

In the High Court of Justice, Chancery Division,

In the suit Thornton v. Stevenson.

The Stocks remaining in Court to the credit of this cause are as follows:

Great Western Railway 5 per cent. Guaranteed Stock	8894	0	0
Midland Railway 2½ per cent. Perpetual Preference Stock	14992	8	5
	£23886	8	5

After payment of the Annuities, now amounting to £300 per annum, the Society is entitled to one-fourth share of the residue of the Income of the above Funds. This is payable after the 10th April and 10th October in every year.

Witness our hands this 22nd day of March, 1911.

P. CARLYON-BRITTON.
 AYMER VALLANCE.
 EDWARD S. PRIOR.

and a hammer. The ground of these panels is relieved by punch markings. The four traceried panels of the front are elaborate, and of a somewhat continental type, not uncommon, however, on bench ends and the like, and, while presenting a general symmetry of arrangement and treatment, are each different from the other.

The two lower panels are divided by three main vertical centre lines, subdivided to form six bottom panes, while the two upper panels are divided into three main vertical compartments with two outer half or split compartments, giving eight bottom panes. The bottom panes of the two lower, and of the right-hand upper panel, are single cusped, while those of the left-hand upper panel are double cusped.

There seems to be no vestige of the double locks commonly found upon parish chests, but the top, which is nailed down, is probably of the date of the cupboard alteration, and not the old lid. There are no vestiges of hinge marks for a lifting lid, and the depth of the chest would be too great for convenient use as a coffer, nor is its construction of sufficient strength to warrant the view that it was intended for use as a parish chest.

The church of St. Sennen, Senan, or Sannan, at Bedwellty is dedicated in honour of an Irish saint of considerable renown in Celtic countries. Abbot Confessor of Iniscathy, in the estuary of the Shannon, his name is attached to the churches which he probably founded, in Cornwall, near the Land's End, as Sennen; in Denbighshire as Samnan, at Llansannan; in Brittany, at Plouzané, as Seny, and here at Bedwellty as Sannan, sometimes, however, spelt Sennan.

He was an intimate friend of St. David, whom he visited, on his way to the Continent on pilgrimage, and to this visit perhaps may be attributed the churches of Bedwellty and Llansannan, as also his inclusion in the triplix of saints commemorated at Llantrissant in Anglesey. According to Francis Arnold Forster, in *Studies in Church Dedication*, the beehive huts in the Magheries Islands, off the coast of Kerry, are associated with the name of St. Senan. Within St. Senan's parish of Zennor (anciently called Senan) in Cornwall, there is the best English example of this form of structure, which tends to confirm the identity of the saint.

This church of Bedwellty occupies a fine high perched and conspicuous site, about 1,000 ft. above the sea, on the range of hills which form the south side of the valley of the Sirhowy river in Monmouthshire.

It is built of the local sandstone, a hard intractable stone abounding in this region, and still quarried within a few hundred yards of the church. This stone contains a good deal of iron which pleasantly diversifies its general bluish grey colour with



CHEST FROM ST. SANNAN'S CHURCH, BEDWELLTY, MONMOUTHSHIRE.

streaks and patches of rusty orange. The roofs are covered with rough thick irregular stone tiles of the same stone.

The church is interesting in plan, and consists of parallel twin naves of practically identical dimensions, with a single broad and squat chancel, approximately centring with the arcade which divides the naves, and a western square tower centred upon the southern nave.

The arcade consists of five arches acutely pointed, of roughly masoned splayed mouldings, carried upon very squat round piers of rough dressed stone with simple splay-moulded caps and bases—all apparently of the early fourteenth century. The internal wall faces of the naves have, of course, formerly been plastered and almost equally of course, have been foolishly scraped to give an unintended view of the rough sandstone rubble. The junction pier, which forms at once the eastern termination of the nave arcade and the responds of the twin chancel arches, is a trefoil in plan.

The chancel is covered by a wagon-roof ceiling, until lately of dilapidated plaster, now of oak boards; it has three low square-headed windows, those on the north and south sides old, and of late fifteenth- or early sixteenth-century type, and has a narrow pointed arched priest's doorway, apparently of the fourteenth century, on the south side.

The tower is the finest feature of the church, and is handsome in its rough way and well proportioned. It seems to be of the fourteenth century with fifteenth- or sixteenth-century alterations and additions. The tower arch to the south nave is of good typical mid-fourteenth-century type, and the door at the base of the turret stairs is interesting with its simple broad splayed moulding and bold stops.

The termination of the stair turret, which is oblong in plan, and attached to the north-east angle of the tower, is interesting. It consists of a small stone-floored enclosure, roughly 4 ft. by 3 ft., walled in by the battlemented parapets on the three outer north, east, and west sides, and with an opening towards the tower roof on the south side. Its use is obvious as a beacon turret, the opening serving for the stoking of the fire, which must have been of faggots, instead of the commonly used pitch-pot.

The position of this tower would give it prominence, and its beacon fire—one of a chain to guard the English border-line beyond Severn—would be conspicuous for miles, and would transmit a signal to the next hill ridge northward, or even to the Brecknock Beacon, which, in clear weather, is well in view. Mr. William Coxe, in his well-known *Historical Tour in Monmouthshire*, 1801, says 'the church of Bydwellty is a Gothic structure of some antiquity; the square embattled tower is built with brown

rubble and coigned with hewn stone; the battlements as well as the body are whitewashed. It is dedicated to St. Sannan, another Welsh saint of whose lineage and merits I am ignorant, and is, with Bedwas, held in commendam by the See of Llandaff.

I think the whitewashing of the tower and church, of which traces remain, are merely due to local custom, and the desire for weather-proofing on an exposed site, in a wet country, and have no significance as a land or sea mark.

The immediately neighbouring church of Mynyddyslwyn is also high-perched and conspicuous, on a hill four or five miles to the southward and nearer the Bristol Channel; it has a beacon turret, similar to that at Bedwellty, and again attached to the north-east angle of the tower.

Gellygaer has none, and my hurried visits to the neighbourhood have, so far, not enabled me to discover others. Though I have heard of similar turret tops in Herefordshire and elsewhere, the information has not been of so definite and reliable a character as to embolden me to lay it before this Society.

It would be extremely interesting to follow up and substantiate not only the chain of beacons along the Anglo-Welsh border, of which Bedwellty and Mynyddyslwyn form links, but to investigate the existence and relative disposition of beacons where they occur in this and other countries. Instances of beacon turrets are, I believe, not uncommon, but an iron cresset fixed to the tower parapet seems to have been in more general use in the south and west of England, rings, sockets, and other marks of their attachment being not infrequent. I think the fact that the short conical terminals or spirelets of so many fourteenth- and fifteenth-century battlemented turrets are of stone, whereas the tower roof itself is usually lead covered, is very possibly largely due to their use as positions for cressets. It is at any rate observable, that even in districts where stone was not obtainable locally, and was therefore precious, it was still very generally used for turret roofs or spirelets. An Act of Edward III ordains that beacons 'should be high standards with their pitch pots'.

I cannot state positively that the towers of either Bedwellty or Mynyddyslwyn are visible from the Channel, though I believe that the latter must be so, and am fairly certain that flares on either might be easily seen by night out at sea. If that is the case, these beacons may also have served on occasion as sea lights to a rather difficult channel.

The subject of ancient sea lights and marks is a very interesting one, and there are many old statutes and local orders and enactments concerning their erection and preservation, and the penalties for their damage or removal.

Of sea lights at the entrances to harbours and on high points

over anchorages there are many ancient examples. At St. Michael's Mount, in Cornwall, you have the stone structure popularly called St. Michael's Chair, while on the coast of France, at Calais, Dieppe, and elsewhere, there are several ancient lighthouses. This, however, is a large subject in itself, and I will trench no further upon it. I have indeed, I fear, been most discursive, and have strayed from boxes to beacons, and beacons to sea lights, in a desultory manner for which I apologize."

MR. VALLANCE thought the chest not earlier than 1520. The pattern was traditional and the date must be deduced from its latest feature. The looped treatment of the ribbon in the lower panel was a sign of decadence.

MR. LAWRENCE WEAVER inquired how the wooden door from the stairway to the tower roof was protected from the flames of the beacon, which would pass through the opening above.

MR. HOPE questioned whether the chest was a piece of church furniture at all, though it might have been placed in the church to be useful. It resembled Flemish work of the middle of the fourteenth century, many of the details being found on other decorated furniture in this country. Mr. Warren had pointed out the absence of the locks which would be essential on an ecclesiastical chest; and the absence of carving at one end was another argument.

DR. MARTIN asked if there were any authentic instances of towers being used as beacons in the manner suggested. The stone would get red hot and be split into fragments if a shower of rain followed.

MR. HARDY observed that all lighthouses before the eighteenth century were towers of stone.

MR. BREWIS mentioned that the stonework of the tower of Alnwick Church in Northumberland was red and burnt, both it and a tower one mile north of the church having been used as beacons to give warning of a border foray.

THE PRESIDENT said that of the three opinions as to the date of the chest he was inclined to accept that given by Mr. Vallance, the architectural features being clearly of the first quarter of the sixteenth century. He assumed that all the carvings were approximately contemporary, and knew of no domestic furniture of that size and proportion. If not ecclesiastical, such chests should

be comparatively common, but he could recall no similar examples, either inside or outside a church. The omission of carving on one end was not of much significance, and might be accounted for on either hypothesis.

Mr. WARREN replied that there were no signs of any original doorway in the church tower, and he believed that none existed so long as the tower was used as a beacon. The existing door was of modern origin, and the whole structure was formerly of stone to withstand the heat of the beacon. Another example of a stone beacon tower was at Mont St. Michel. The use of the tower as a beacon ceased 300 years ago, and there was no reason to light an inland beacon at that spot. The stone was very hard, and elsewhere in the church had turned black, hence the colour was not necessarily due to fire. The Bedwellty chest dated in his opinion from the end of the fifteenth century. The carving was similar to work on chests and screens in Somerset and Gloucestershire, though the front panel certainly had a continental appearance. The chest had never left the parish and there was no record of its purchase, but tradition was of little value in such a case. He had found it in a neglected state and caused it to be cleaned and repaired. It had always stood in the same place, but may have been acquired as an aumbry.

W. PALEY BAILDON, Esq., F.S.A., read some notes on a Wardrobe Account of 16-17 Richard II, 1393-4. The principal objects of interest mentioned were a number of white harts, Richard's well-known badge, one of which was made of 'cokill', probably mother-of-pearl; three sets of reticulated horse-trappings, with pendants and bosses of latten, and cygnets in the interstices; a pair of 'patyns' for the king; and a case of combs, containing also a mirror and a pair of scissors. Dealing with costume strictly so called, Mr. Baildon traced the history of the sleeveless outer garment, known to brass-rubbers as the *cyclas* or *jupon*, from the Arabic *jubbah* or *jibbah*; this word became naturalized in English, through the French, as *jupe*, though its proper English equivalent seems to have been petticoat. The *jupe* was worn by both sexes, at first as an outer garment, like the *jubbah*; in the fourteenth century it began to fit closer round the waist and developed a fullness in the lower part, approaching to a skirt. By the middle of the fifteenth century it had become an under garment, as it still continues; but while men have retained the upper portion, the waistcoat (called a petticoat in Kent as late as 1736), women have retained the lower portion, from the waist downwards, which they still call the *jupe* or petticoat.

Two remarkable garments were made for Richard, probably for a masque of some sort. One was a hanselin (a sort of loose cloak) of white satin, embroidered with leeches, water, and rocks, and embellished with fifteen silver cockles and fifteen whelks and fifteen mussels of silver-gilt. The other was a white satin doublet, embroidered with gold orange-trees, and adorned with a hundred silver-gilt oranges. The large number of garments and other articles of green and white suggests that these were used by Richard as his livery colours at this period.

Mr. GIUSEPPI remarked that there was no mention in the paper of the name or office of the accountant: it was necessary to distinguish between the Wardrobe and the Great Wardrobe.

Mr. JENKINSON thought that it would be beneficial to print such accounts for the useful information they contained, but some special steps must be taken, as they could not be printed in the ordinary way by the Record Office. Others he had investigated contained details of the woods used in carpentry, the planks used for seats and tables, the gowns ordered for the coronation of Edward III and Queen Philippa. One account already printed by the Society gave information that it was not intended to give, and such sidelights were important, as these records were not drawn up expressly for the benefit of posterity. Thus could be gleaned information about the progress of negotiations for peace with France, and the whereabouts of Edward III's mother. The Society's printed wardrobe account¹ contained an incorrect identification: the Countess of Pembroke referred to was really the Dowager.

Mr. PAGE emphasized the importance of such records, and pointed out that the Society had at one time contemplated printing other accounts in continuation. He hoped that the enterprise would not fall through.

Mr. HOPE mentioned that the Society's library contained three wardrobe accounts that awaited publication.

Mr. LAWRENCE observed that the subject of wardrobe counters was closely allied to Mr. Baildon's paper. They were issued just before Richard II and were very rare, but he was able to exhibit an electrotypes of a specimen in the British Museum.² There were three varieties with the obverse a six-foil enclosing a shield of arms and legend *Edwardus Rex regnat*. Another had the lion of England with a banner attached to the neck, France and Eng-

¹ *Archaeologia*, xxxv. 457.

² *Medallie Illustrations*, i, pp. 7, 8.

land quarterly. Only six or seven originals were known, and they were probably checks for articles taken out of the wardrobe, which had to be redeemed.

Mr. BAILDON in reply said the account came from a private collection, and bore no name except those of the provers.

The PRESIDENT wished that entertaining papers of this kind could be brought before the Society more frequently. Small details of daily life were interesting, not less so because they concerned the highest persons in the land, while more strictly archaeological matters hardly appealed to those unversed in their technicalities. The value of money at this period was well indicated by the paper; and the price of a lamb's skin seemed to him extraordinarily high, one shilling and tenpence being then capable of purchasing a considerable amount of other commodities. The Society would sympathize with the proposal to print at least its own wardrobe accounts, but the funds were just now being drawn upon largely for research and domestic purposes. If properly edited, such documents might yield much valuable information.

Mr. Baildon's paper will be printed in *Archæologia*.

Thanks were ordered to be returned for these communications.

ANNIVERSARY

THURSDAY, 27TH APRIL, 1911.

CHARLES HERCULES READ, Esq., LL.D., President,
in the Chair.

Robert Garraway Rice, Esq., and Mill Stephenson, Esq., B.A.,
were appointed Scrutators of the Ballot.

The PRESIDENT delivered the following address:

"GENTLEMEN,

The year that has passed since I last had the honour of addressing you has been an uneventful one for the Society. Our domestic concerns have proceeded smoothly, and I trust with profit to science. At any rate, we have had material in plenty for our evening meetings, and I think the interest in our proceedings has been fully maintained, if the attendance of Fellows be taken as an indication. It has appeared to me that the aver-

age number of those present at the meetings during the past year has been exceptionally high, a very satisfactory symptom.

The editorial committee has been active during the year, and here again the Society is to be congratulated on the more prompt publication of communications; while in the actual printing of the volumes I think the high quality is maintained, and at a reduced expenditure.

The changes due to the appointment of a new Assistant Secretary have, so far as I have heard, been again beneficial for the current business. Mr. Kingsford did not come to us without experience of the kind of work that he had to perform, and he was thus able to master the details of his office. Among the changes recommended to the Council was that of conferring upon our Clerk, Mr. Clinch, the title of Librarian, in recognition of the work and responsibility that had fallen upon him in connexion with our library. The Council had pleasure in making this addition to the dignity of Mr. Clinch's office.

As I mentioned last year, the allocation of the rooms vacated by the Assistant Secretary was a problem not easy to solve. The plan is eminently unpractical, and it is hard to conceive how it came to be evolved, even to serve as a residence. A committee was appointed by the Council to report on the question, and their recommendations go into some detail, but even now the destination of some of the rooms is uncertain. In any case the Society will work with greater freedom with the added space. The main point to which I may allude is that it has been definitely decided that it would be impolitic, in view of the possibilities of the future, for us to invite or allow any other society to become tenants of any part of this space. Such a decision is not likely to be misinterpreted by any of those bodies who had contemplated finding a shelter under our roof, for we treat all allied societies with as great hospitality as lies in our power, and I think my own personal desire, to do all that we can in that direction, is well known to the Society. My favourite scheme of a federation of archaeological societies, which I thought might be fostered by propinquity, must, I fear, be deferred to more spacious times.

The names of those Fellows who have died since the last Anniversary are as follows:

Ordinary Fellows:

Colonel Eustace James Anthony Balfour, A.D.C., M.A.
(14 February, 1911).

Rev. Canon William Benham, D.D. (30 July, 1910).

Thomas Nadauld Brushfield, M.D. (28 November, 1910).

Charles Butler (29 June, 1910).

John Willis Clark, M.A., Litt.D. (10 October, 1910).
Sir Caspar Purdon Clarke, Knt., C.V.O., C.I.E. (29 March, 1911).
Ernest Crofts, R.A. (19 March, 1911).
Thomas McAll Fallow, M.A. (25 November, 1910).
*Charles Hodgson Fowler, M.A. (14 December, 1910).
Henry Andrade Harben, B.A. (18 August, 1910).
Edward Lee Carteret Price Hardy, M.V.O. (27 August, 1910).
Albert Hartshorne (8 December, 1910).
Sir Richard Rivington Holmes, K.C.V.O. (23 March, 1911).
Captain Alfred Hutton (18 December, 1910).
James Cove Jones (September, 1910).
Thomas Frederick Kirby, M.A. (12 November, 1910).
Arthur Gregory Langdon (29 March, 1911).
William Loftie Rutton (3 February, 1911).
Arthur Banks Skinner, B.A. (7 March, 1911).
Samuel, Baron Swaythling (12 January, 1911).

Honorary Fellow :

Léopold Delisle (23 July, 1910).

The following has resigned :

John Brinton.

The following have been elected :

As Ordinary Fellows :

Rev. Arthur John Beanlands, M.A.
Charles Eyre Bradshaw Bowles, M.A.
Herbert Henry Edmund Craster, M.A.
Samuel Denison.
Edward Dillon, M.A.
John Pattison Gibson.
Arthur Edward Henderson.
Geoffrey Dudley Hobson, M.A.
Charles Hilary Jenkinson, B.A.
Sydney Decimus Kitson, M.A.
Philip Guyon Laver.
Laurie Asher Lawrence, F.R.C.S.
Edward Thurlow Leeds, B.A.
Robert Martin-Holland.
Hardy Bertram McCall.
Duncan Hector Montgomerie.
Rev. Edmund Robert Nevill, B.A.

* denotes Compounder.

Frederick John Morton Palmer, M.B.
Robert William Ramsey.
Louis Francis Salzmänn, B.A.
Henry Symonds.
Alexander Hamilton Thompson, M.A.
Reginald Campbell Thompson, M.A.
Horace Wilmer, M.I.C.E.
Robert Cleremont Witt, M.A.

Honorary Fellows:

M. Joseph Déchelette.
Professor Dr. A. von Domaszewski.
M. Camille Enlart.
M. le Comte Robert de Lasteyrie.
M. Eugène Lefèvre-Pontalis.
Professor Dr. Ritterling.

'The death of M. Delisle is a serious loss for French learning. If the history of our institutions, of our mediaeval glories, were more popular in France, his death would be thought an occasion for national mourning.' In these words M. Charles Bémont begins his notice of the late Monsieur Léopold Delisle, for so many years head of the Bibliothèque Nationale in Paris, and an honorary Fellow of this Society since 1852.

M. Delisle was born at Valognes on 24 Oct., 1826, and died suddenly on the 22 July last at Chantilly. His studies in palaeography began while he was still at school, by copying a cartulary, in which was a charter of Henry II of England, a monarch whose acts were the subject of M. Delisle's last studies. He entered the École des Chartes in 1845, and worked there for four years. Before leaving he had produced a memoir on 'Des monuments paléographiques concernant l'usage de prier pour les morts', to which was accorded a medal by the Académie des Inscriptions, and the dissertation was characterized in eulogistic terms: 'Pour un début dans la science, il serait difficile de rien produire qui montrât mieux tous les caractères de la maturité.' In 1857, while still a simple employé in the manuscript department of the Bibliothèque Impériale, he was elected an ordinary member of the Académie des Inscriptions. He had entered the Bibliothèque in 1852, the year in which he was elected one of our honorary Fellows, and there he remained, a marvel of tenacious industry, until the year 1905, when he was abruptly placed on the retired list, an indignity that he resented without dissimulation—and by a cruel stroke of fate his wife died on the day of his retirement.

It is hard to imagine the confusion that reigned in the great

national library when Delisle became head in the year 1874. Catalogues still were in use that had been begun early in the eighteenth century, and doubtless carried forward on their original lines. But in many cases catalogues did not exist, and Delisle set himself to reduce order out of such a chaos with results that make work in the Bibliothèque nowadays quite as it is in our own British Museum. An admirable administrator, he was at the same time an indefatigable student of mediaeval palaeography and ceaselessly edited document after document. A few days ago I was looking through a catalogue of a French second-hand bookseller and found page after page of nothing but memoirs and books by Delisle, but the bibliography of his work prepared by M. Paul Lacombe alone can give a due idea of his untiring brain. The character sketched by M. Bémont is admirable: the gift of accurate observation, a judgement at once certain, clear, and penetrating, with but little imagination, though possessing a rare faculty for collecting facts, for cataloguing them and setting them out in the most logical order, a memory at the same time quick, extensive, and tenacious, and to conclude, a power of work that age could scarcely touch. Such a combination of qualities would of necessity produce a man beyond his fellows, and I can vouch for the accuracy of much of this description. When I first made the acquaintance of Delisle in 1875 he was in the prime of life and one of the most popular men in the archaeological world. I well remember his benevolent reception of me at the Bibliothèque, and from that time onwards we have kept up a desultory but always friendly correspondence.

Not France alone, but the whole literary world must deplore the passing of so noble and useful a type as Léopold Delisle.

In SIR RICHARD RIVINGTON HOLMES, K.C.V.O., the Society has lost one of its oldest Fellows and I one of my oldest friends. Born in 1835, at the age of 19 he entered the British Museum, of which institution his father had been an official, and here he was attached to the department of manuscripts until the year 1870. The quiet uneventful life that is the lot of the majority of such officials was, however, in Holmes's case broken into by his selection as archaeologist to accompany the expedition under Sir Robert Napier against King Theodore of Abyssinia. Here he not only gained novel experiences, but succeeded in acquiring a number of important additions to the museum collections, in the form of manuscripts and church ornaments, illustrative of the Abyssinian form of Christianity. His very success gave rise to a curious incident, which attracted a good deal of attention at the time. Mr. Gladstone, acting on imperfect information, accused Holmes of having robbed churches of their ornaments,

and the Trustees of the Museum of supporting him in these sacrilegious acts. Inquiry soon showed that these charges had in fact no foundation, and that, on the other hand, Holmes had been instrumental in saving from destruction a great quantity of valuable material which otherwise would have been destroyed. What this material is can still be seen at the British Museum, though by some curious official arrangement the most valuable object intrinsically, the golden crown of King Theodore, though bought with British Museum funds, has ever since been in the South Kensington Museum.

To most of us Holmes is more familiar as librarian at Windsor, a post he held for thirty-six years, with great advantage to the royal library. There his wide knowledge and artistic tastes enabled him not only to effect improvements in the arrangement of the works of art and books under his charge, but also to secure for the royal collection many valuable additions, and it is as the royal librarian that his name will be chiefly remembered. He was a very competent artist, and also an authority on old bookbindings; to the wider public he is probably best known by his attractive book on the life of Queen Victoria, and that of the late King, which is still in course of publication. Personally he was the soul of good fellowship, and readily brought his wealth of recollections to the entertainment of his friends; his genial face will be much missed among us here. He was elected a Fellow on the 22 March, 1860, and was lately one of our Vice-Presidents. It is curious that his death took place on the 51st anniversary of his election to our Society.

SIR CASPAR PURDON CLARKE, who died on 29 March at the age of 65, had been for some months past in a serious state of health, and the end did not come as a surprise to his friends. Trained as an architect, he filled a number of posts under the Office of Works and in connexion with the old Science and Art Department. For this latter he undertook missions on the Continent and to the East for the purpose of augmenting the collections at South Kensington. At other times he was commissioner at many of the exhibitions in Europe and America, a form of activity in which he took great pleasure. But it was only in 1880 that he was first attached to the staff of the South Kensington Museum, and it sounds somewhat odd that it was through me that he was so appointed. When the India Office decided to discontinue its museum, the collections were in the first instance offered to the British Museum. They occupied at that time a long range of galleries at South Kensington, as indeed they still do, I believe. So far as this transfer was concerned, the British Museum meant the department of which Sir Wollas-

ton Franks had charge, and I was his only assistant. He consulted me as to who could be found to take over this huge addition to our responsibilities, and I recommended Mr. Caspar Clarke, as he was then called, who was unknown to Sir A. W. Franks. Before anything could be settled, however, the Government decided that the modern side of the India Museum, by far the larger, should go to the South Kensington Museum, while the antiquities alone came to the British Museum. The situation being thus changed, it was the former institution that needed an officer to take charge of its new acquisition. Sir Philip Cunliffe Owen, then Director at South Kensington, had known of our plan, and in consequence secured the appointment of Clarke to superintend the arrangement and take charge of the Indian collections there. He found in this a thoroughly congenial field, for in all the time I have known him, he leant always towards the study of technical processes and took the keenest pleasure in dilating upon the differences in method between the Oriental and Western methods of making pottery, jewellery, glass, or other artistic products. In course of time other steps of the official ladder were open to him, and he became Assistant Director of the Museum, and finally Director. Although the added dignity was considerable, it is probable that Clarke got less real enjoyment from this post than from those that led to it. The irksome routine that is inseparable from such a position was to him particularly trying, and for a variety of reasons, which do not concern us here, he elected to retire even before the statutory age, to take a post that to most of us would appear even more strenuous, viz. the direction of the Metropolitan Museum in New York in succession to Cesnola. Here he remained for four years, organizing exhibitions and to some extent reconstituting the museum on the familiar lines of South Kensington. Then ill health overtook him, and he came back to England to recruit, but to little purpose. He never recovered sufficiently to return to his post. It is pleasant to record here that the arrangements made for his retirement were on the most generous lines, and that for these Mr. Pierpont Morgan, the chairman of the Museum Trustees, was chiefly responsible. It is sad that he lived so short a time to enjoy their liberality.

Purdon Clarke was a genial type of Englishman, full of restless energy and always ready to undertake any work that belonged to his own *métier*. He was most popular with the frequenters of the South Kensington Museum, and I understand fully as popular with the similar public in New York.

In ARTHUR BANKS SKINNER the Victoria and Albert Museum lost an invaluable officer and the English art world a member it

could ill spare. He was one of those rare characters who possessed a true and appreciative love for the works of art with which it was his business to deal, and the influence of his taste and wide knowledge has left a mark that should be lasting on the museum. Born in the year 1862, he had not attained his fiftieth year on his death on the 7th of March last. He graduated at London University and entered the South Kensington Museum in the year 1879, in the day of that most genial of Directors, Sir Philip Owen. Modest and unassuming in manner and entirely destitute of the power of self-advertisement, it was many years before his useful presence was known to any but the *habitues* of the place. But in his quiet way Skinner was laying up knowledge and making intimate acquaintance with the varied classes of art with which he was surrounded, so that, I am told, no one could compare with him in completeness of knowledge of the contents of the museum. Thus, when Sir Purdon Clarke retired, it seemed natural that Skinner, his next in command, should fill the post, and he became Director. He was allowed to retain this dignity for four years, when he was abruptly superseded, and relegated to a subordinate position. Here we have only to deal with him as a Fellow of this Society, and this is not the place, nor, assuredly, am I the person, to enlarge upon an incident that aroused a good deal of comment at the time, but the opinion is widely held that, acting on a highly strung temperament and a constitution none too robust, it hastened his end.

His services to the museum are many, but not the least of them is the close friendship he formed with Mr. Salting, and it cannot be doubted that his devotion to Mr. Salting, and the ready help he always gave him, had great weight in securing for the nation the magnificent collection that has just been set out as a whole for the first time in its existence. Uniformly courteous and obliging, Skinner was well known and much liked by colleagues both at home and abroad. He was elected a Fellow in 1896, and served on the Council, while at the time of his death he had been nominated an auditor of the Society's accounts; his attendances at our meetings were not very frequent, but he was often useful in obtaining the loan of interesting and important objects for exhibition.

MR. JOHN WILLIS CLARK, Registry of the University of Cambridge, was one of those untiring versatile minds whom it is a real pleasure to know. As classical scholar, biologist, archaeologist or administrator, he took in all a high place, and what is perhaps not so common in a University don, he was as much at home in Paris as in England, and his friends in that city comprised the officials of the national library and the actors at the

Comédie Française. A man possessing a mind of such remarkable grasp and elasticity, width and depth of learning in many fields, would assuredly import into University life many qualities that would help in the moulding of its character, and it is not wonderful that, as was said in his obituary notice, 'he had a deep influence on the life of many a Cambridge student.' While his personality was so full of charm and broad utility, he has also left behind a number of works that show, though perhaps not quite truly, his many-sided activities: *The Architectural History of the University and Colleges of Cambridge*, *Libraries in the Mediaeval and Renaissance Periods*, *Augustinian Priory Observances*, and *The Care of Books*—these joined to memoirs on his special line in biology only partly record the variety of his interests. He died at Cambridge on the 10th of October last at the age of 77.

MR. ALBERT HARTSHORNE has long been a familiar figure in our rooms, and in him archaeology loses an industrious and painstaking worker. Born in 1839, his youth was spent in an antiquarian atmosphere, his father, the Rev. C. H. Hartshorne, being a voluminous writer on such matters, while his grandfather, the Rev. Thomas Kerrich, was a collector, and left to the Society a number of the portraits on our walls and various other matters. Mr. Hartshorne was a constant contributor to our proceedings, as well as to those of the Archaeological Institute, of which he was for many years secretary and editor of the *Journal*, his favourite subjects being probably those connected with costume and the equipment of knights, though his tastes were catholic in all that related to mediaeval or later times. His two important works on *The Recumbent Effigies of Northamptonshire* and *Portraiture in Recumbent Effigies* are well known, and as much may be said of the fine volume on *Old English Glasses*, a book which has done much to call public attention to a hitherto neglected subject.

Mr. Hartshorne had lived for some years past at Worthing, more or less in retirement. While living near Ashbourne in Derbyshire he was much more active as an archaeologist. He was elected into our Society in the year 1882.

COLONEL EUSTACE JAMES ANTHONY BALFOUR, who died on the 14th of February, was better known both to us and to the general public as an architect and as colonel of the London Scottish Volunteers than as an antiquary. The record of his life is in fact filled with these two functions, and it may be that it was well and amply filled. Born in 1854, he was the youngest brother of the present leader of the Unionist party. While at Cambridge he took great interest in architectural matters, and on leaving the University was articled to Mr. Basil Champneys.

Later he entered into partnership with Mr. Thackeray Turner, another of our Fellows. His appointment as surveyor of the Duke of Westminster's Grosvenor Estate, joined to the colonelcy of the London Scottish, may well have sufficed to occupy a busy life, and have left but little leisure for the antiquarian side of his profession.

ERNEST CROFTS, R.A., was one of several members of the Academy whom we have had the pleasure of welcoming here as antiquaries. Born in 1847, he completed his artistic training in Düsseldorf, where he acquired the liking for the battle scenes that have formed the bulk of his work. The antiquarian and historical tastes thus engendered very naturally led him to associate himself with our studies, and he was elected a Fellow in the year 1900. Although he took no active part in our proceedings, he was always ready with help in any matter in which his knowledge could be of service, and to be a good friend to the Society. He died on 19 March last.

The name of LORD SWAYTHLING is associated in antiquarian circles with the collecting of old English plate. Known successively as Montagu Samuel, Sir Samuel Montagu, and of recent years by the title attached to his peerage, he was an invariable attendant at our meetings when a fine piece of plate was to be seen. In the financial world he was principally known as an authority upon foreign exchanges and in the silver market. It has been said that his ambition in collecting plate was to secure all the examples figured in Cripps's *Old English Plate*, and he was successful in obtaining a good number. Many of these have been shown at public exhibitions, at the Burlington Fine Arts Club, and elsewhere, where Sir Samuel Montagu kindly lent them. Beyond this limited field of collecting, Lord Swaythling's energies were chiefly devoted to the various organizations for the benefit of his own race. He died on 12 January, having been born in 1832.

DR. THOMAS NADAULD BRUSHFIELD, of Budleigh Salterton, who died 26 November last, was elected a Fellow in 1899, having for some time served in the useful office of Local Secretary of the Society. He is a good example of the longevity of the active brain. Born in 1828, his long life was spent in one form of mental activity after another. As a doctor of medicine his early years were passed at the London Hospital, later he became superintendent of the Cheshire County Asylum, and afterwards held a similar post at the Brookwood Asylum in Surrey. On his retirement from professional work he lived in Devonshire, and with the aid of an unusually fine library devoted himself to literary work, mostly in connexion with his adopted county and especially with Raleigh. On these and kindred matters he made communications to the Society from time to time.

MR. JAMES COVE JONES, who died at the age of 88, was a well-known man in his county of Warwick, where he was Deputy Lieutenant. He filled many of those unpaid public offices which are so marked a character in English county life. For us he has the distinction of having been a Fellow for 65 years, his election having taken place in 1845.

CAPTAIN ALFRED HUTTON, of the King's Dragoon Guards, was in all ways a striking personality, and his death on the 18th of December has taken from our body a type that for us was unique. No one who was present at the display of swordsmanship that was given in our Library under the presidency of Lord Dillon will forget the part that Captain Hutton played on that occasion. His enthusiasm for sword-play dominated his whole life and regulated the pose of his figure, and it was always a pretty sight to see him, foil in hand, fall into the posture of defence. As a keen and hard-working student of the ancient methods of the 'arme blanche' his knowledge was of great value in determining points of controversy on the peculiarities of ancient weapons, as may be seen in his published works, *The Sword of the Centuries*, *Old Sword Play*, and *The Swordsman*. He was 71 at the time of his death, and to the end maintained the rigid upright carriage that was his most obvious characteristic.

THE REV. WILLIAM BENHAM, Rector of St. Edmund, Lombard Street, who died on 30 July last, aged 79, was one of the most genial churchmen, and a favourite in all societies. Elected a Fellow in 1883, he was a not infrequent attendant at our meetings, and took a keen interest in matters connected with the Church. From the smallest beginnings he attained to a very considerable position among his contemporaries, first as secretary of the Society for Promoting Christian Knowledge, then as professor of Modern History at Queen's College, Harley Street (before held by F. D. Maurice). He was a voluminous writer, chiefly on religious matters, with an occasional excursion into English literature, and at the same time a constant writer in the *Church Times*.

MR. CHARLES HODGSON FOWLER, who died on the 14 December last, aged 70, was well known as an ecclesiastical architect. Acting in that capacity to the Dean and Chapter of Durham for many years, he executed a good deal of the work of restoration, under Sir Gilbert Scott, whose pupil he was; he was also consulting architect for both Rochester and Lincoln Cathedrals. As was but natural, he came before us from time to time in connexion with discoveries in Durham Cathedral and elsewhere.

MR. EDWARD LEE CARTERET PRICE HARDY, M.V.O., met with an unfortunate end in August last, having, with his son, died

from exposure on the slopes of Snowdon. With his brother, Mr. W. J. Hardy, he was brought up in an atmosphere of historical research, and assisted his father, the late Sir William Hardy, Deputy Keeper of the Public Records, in editing the later volumes of Waurin's Chronicle for the Rolls Series. Mr. Hardy was an admirable type of the English civil servant. He was chief clerk in the Duchy of Lancaster office, and at a dinner given on his retirement Mr. Herbert Samuel paid a high tribute to his many good qualities. He spoke of him as the greatest living authority on Duchy rights and liberties and matters of interest affecting the Duchy from the time of Edward III, and in addition bestowed the highest praise on his personal character and qualities.

Although he was not a Fellow of the Society, I cannot pass over in silence the death of my old friend, PROF. T. RUPERT JONES, F.R.S., about a fortnight ago, at the ripe age of 91. Born in Wood Street, Cheapside, he became in 1850 assistant secretary of the Geological Society, and later lecturer on geology at the Royal Military College, Sandhurst, and examiner to a large number of public institutions. His claim to notice here, however, is the part he took in the publication of the remarkable results of Mr. Henry Christy's exploration of the stalagmitic caverns of Dordogne, under the title of *Reliquiae Aquitanicae*, a truly remarkable account of a most astounding series of discoveries, though now nearly forgotten in the mass of more recent publications on the same subject. But Rupert Jones should be held in remembrance by all who feel interest in the dawn of archaeology.

The Society will remember that in my Address last year I adumbrated a scheme for entering into direct relations with the teaching of archaeology in one of our Universities, preferably the University of London. I pointed out how beneficial it would be to the Society to take a wider view of its responsibilities than is to be found in the mere reading of papers, and in living the cloistered life. Such an existence may be calm, it may keep us remote from the storms that agitate and distract the world without; it might even serve as a silent protest against the prevalent methods of self-advertisement that to many of us are so repellent. It may serve these purposes to the full, but at the same time we should, I think, feel conscious that we were not adequately performing the functions for which we were constituted. It has at times passed through my mind that the Society hardly keeps itself in the public eye to the extent that it might and perhaps should do; that its usefulness might be enhanced by taking a more prominent place in public discussions which originate outside its walls. It is at any rate certain that

it has not been our practice to thrust ourselves into the forefront, and it may well be that our dignity has been the better preserved, without any corresponding loss.

It is at least certain that a part of our legitimate business is to encourage the study of ancient times, and to help in what way we can those who have made it their business to train the younger generation in knowledge of the history of the past. The Council agreed with me in that view of our functions, and gave lengthened consideration to the suggestion I made last year. This, you will remember, was to the effect that in each year a medal and a sum of money should be offered to the University of London to be bestowed upon the most promising student in archaeology. The University of London received the proposal with great favour, and delegates were appointed from their side, and from that of the Society, to confer and settle the conditions under which the prize should be bestowed. At this conference the matter was thoroughly debated, and, as was natural, certain changes were suggested and adopted by the delegates. The chief of these was that the prize should take the form of a scholarship of the value of £50, and that the subject to which the recipient should devote himself during his tenure should be connected with the archaeology of our islands, and finally, that a medal should be dispensed with.

I confess that this last suggestion gave me pleasure. Medallist art in this country is in so low a state that to produce a satisfactory medal would be a very difficult undertaking, and the number of unsatisfactory medals is already far too great. It is probable, however, that the student who is fortunate enough to gain the scholarship may find an almost equivalent satisfaction in receiving an extra £25 instead of a medal. The subject which is set down for the scholar is, I think, the best that could have been chosen. It will enable him to deal with any subject and in any country, provided it has a distinct bearing upon the past history of Britain, and he may find a field for his labours in France, Germany, Scandinavia, or Italy, or, of course, in our own country, so long as his studies have due relation to British archaeology. It is intended, and precautions have been taken to secure this end, that the scholarship shall be a post graduate course, and we hope that the sum of money awarded will suffice to allow the holder to pursue his investigations for the necessary year. For the present the scheme is held to be experimental, and it has been decided that the agreement made between the Society and the University shall hold good for five years only. This was thought to be the shortest period for putting the scheme into working order. At the end of that period a new conference will be held, and experience will then show whether

and to what extent the scheme has been satisfactory. I trust that this new departure may do good in more directions than one. It will in any case have demonstrated our goodwill, and that we do not take a parochial view of our duties and responsibilities.

The Society may congratulate itself upon the part it took in urging the Government to appoint a Commission for Ancient and Historical Monuments. Its life to the present has been a short one, but its existence is amply justified by the admirable report it has produced on the monuments of the county of Hertford. I have gone through the volume with much interest, and in my judgement it is creditable to every one concerned in its production. The illustrations are admirable and well chosen, though I confess I should have preferred to see the index map printed in a more vigorous colour; in the present tint the smaller names are difficult to read except in the best light. I turned with interest to the description of St. Albans Abbey, a subject that might reasonably be thought to call for vigorous treatment at the hands of professional archaeologists. I was glad to find that the recent history of the building had been treated with great restraint, and that there was no sign of recrimination. Those responsible for the tone of the report had evidently conceived its purpose rightly, as being intended to record the present and actual state of the monuments dealt with, and not as a machine for casting stones at ignorant restorers, whether living or dead. The Commission may be unreservedly congratulated upon its first publication, and if this level of merit be maintained, we shall possess for England an archaeological record of its monuments that will compare favourably with those of any country of Europe.

The present would seem to be a moment for the appointment of royal commissions in matters archaeological. The *London Gazette* of the 13th October last chronicled the appointment of one to deal with the custody and general treatment of public records. This is in itself a satisfactory step, and it is the more satisfactory that the members of the Commission are for the most part men whose knowledge and training have made them very competent to deal with the very difficult business that must necessarily come before them in such an inquiry. It would seem to most people a commonplace that the members of a Commission should know something of the business that is brought before it, and the greater their knowledge the better would the Commission perform its functions. I should not think such a point worth mentioning had I not been gravely

told by a person of great experience in such affairs that it was not thought at all necessary that the Commissioners should have any knowledge of the matters referred to in their instructions; that for such knowledge they looked to the 'experts' who gave evidence. However this may be in theory, I cannot but rejoice that the contrary method has been put into practice in the constitution of this present Commission on our Public Records.

During my official relations with the Society, I have heard complaints from time to time with regard to divers matters in relation to records that will assuredly arise before this Commission, and I would urge upon those of our Fellows who especially deal with records that they should take steps to have their views put before the Commission. I am sure, if any responsible member of this Society should find any difficulty in such a matter, the Council would be glad to lend its influence to further his purpose. I do not, however, think that any such difficulties will be found to exist, for out of a Commission of nine gentlemen, no less than five are Fellows of this Society, and are so described in the *Gazette*, while another Fellow, Mr. Hubert Hall, is the secretary. A Commission constituted on so business-like a footing possesses all the qualities that bid for success, and I trust that useful results will follow from their investigations.

The appointment of these two Commissions is good evidence that the Government feels the national importance of giving attention to the remains of our past history that are still above ground and visible. But in no place better than in our own publications can it be shown that this is only part of the duty of the Government. Take a volume of our *Proceedings* or of *Archæologia* at random, and it proves to demonstration that the soil of England is rich beyond belief in relics of past times, and in great measure these belong to those very periods of our history of which no written record remains. Here, therefore, beneath the ground, unknown and unchronicled, is to be found the complement of those branches of archæology that come within the scope of the Commissions with which I have just dealt. These observations are no doubt commonplace, and recite facts known to you all, but nothing is at times more useful than to state boldly the commonest facts, if they can be profitably applied in a new manner. What therefore I would urge is that the Government should be approached in a tactful way, and be asked to provide an annual grant for the purpose of excavation, and that this Society should be the trustee for its proper expenditure. I dealt last year with the exiguity of our Research Fund, and pointed out how the Society, by which I mean the

individual Fellows, would have to put its shoulder to the wheel and provide funds, or we should find our responsibilities greater than we could bear. Whatever may happen with regard to my present proposal, I still urge the Fellows to do their utmost, for the credit of this ancient body, to raise funds for what is perhaps the most useful branch of our work. But I well know that all of us have calls upon our liberality, and that it is difficult to meet them all in the way one would like. But private enterprise is what creates public spirit, and I trust it may long survive.

At the same time, our responsibilities, though voluntarily assumed, are now very heavy. You know the chief of them: Old Sarum in the first place, and in the second we are practically pledged to the exploration of Wroxeter. In addition we have constant demands for small grants from all sides. But it is with regard to the two great undertakings that I think we can with a good grace apply to the Government for financial aid. Our past record of unassisted exploration is one of which we may be proud. Silchester will for all time stand to our credit as a piece of work well done according to the lights of our time, and a mere recital of our good works there should do something towards softening the heart even of him who holds the purse.

But it is not the intrinsic merit of the work done or to be done that alone should have weight with a Government. That the work should have merit is a necessary condition, but such enterprises as ours add to the intellectual food of the nation, and the mere fact that such tasks are being carried on in the country helps to arouse and quicken the intelligence even of the much-quoted man in the street; they provide him with sane subjects of conversation; they help to revive in his mind long-forgotten scraps of history or tradition; they finally assume the form of crystallized fact and fill the gaps in school histories, and thus eventually, if not at first, they become directly helpful in education and an essential part of it. For these reasons alone we may claim recognition from the State, and I think it is our duty to do so. But even this is not all. A civilized state must of necessity have regard to the proceedings of its neighbours, even in the arts of peace. Its self-love cannot permit that a neighbouring state should conspicuously surpass it in the amenities of civilization, while it has the money, the brains, and the opportunity to hold its own in the same field. It will not be questioned that we possess all these necessary qualifications, and it is, I fear, equally beyond question that most if not all of the continental nations provide out of State funds more money for archaeological exploration than is the case in England, and some of the smaller and less wealthy countries are foremost in this respect. In respect of the importance of our ancient re-

mainly we cannot compare with such a country as Italy, but our wealth is so infinitely greater that we can surely afford to do at any rate as much for the investigation and preservation of those we do possess. I will give a short quotation from a lecture by Prof. von Duhn, dealing with the State control of archaeological work in Italy:¹ 'In Italy the State was and is the pioneer in archaeological investigation. Here and there, by chance more than system, the work is shared by communities, private persons, or, more rarely, by provinces. It is remarkable how quickly centralization by the State has in our department of science superseded that provincial spirit which still makes itself so distinctly felt in political and administrative affairs. All excavations and museums of archaeology are under a General Director of Antiquities; he is assisted by local inspectors all over the country, whose offices are mostly honorary. These inspectors have to keep watch over the interests of archaeology in the widest sense of the word. Their reports on all new discoveries go direct to Rome for publication in the *Notizie*. Reports on the preservation of architectural monuments are sent to the "Uffici regionali per i monumenti", and the directors of the Government museums in various districts receive information referring to works of art or objects of interest in public or private collections, and these museum directors have at the same time the oversight of excavations in their own districts.'

Such a picture as this makes one feel what a vast untilled field we have before us. It is highly probable that the precise arrangements practicable in Italy would be neither practicable nor necessary with us. But the point I wish to make in referring to them is not to commend them as a model for England, but to show rather the intense interest and practical encouragement bestowed upon archaeology in a country like Italy, while with us it is barely recognized.

In Germany conditions are again very different. Apart from the Empire, the local patriotism and emulation of the different states of themselves produce an amount of energy and competition that could hardly be expected elsewhere. But apart from such works as the Saalburg, the excavation and restoration of which is mainly due to the enlightened interest of the Emperor himself, it must not be forgotten that from the early years of the last century the archaeological institute in Rome has been practically conducted by German brains, and the work the Germans have done in Greece is magnificent. Again, there are the splendid achievements of the 'Limes Commission' under Government auspices, an institution which finds

¹ *Journ. Hellenic Studies*, xvi, p. 129.

its parallel in Austria also, and again is an undertaking of the State itself.

During the last fortnight we have had a signal example of the keen interest taken in archaeological exploration by the German Emperor. During his pleasure cruise in the Mediterranean he landed at his favourite resort, Corfu, and spent the whole day in watching the excavations by German archaeologists with the greatest interest. This would be in itself a fact worth chronicling, but the Emperor guides his enthusiasm into practical channels, and was careful to obtain a monopoly for German science in the further exploration of this site. One can only stand apart and admire a man so full of pure enthusiasm, keen and vivid in the most opposite directions, and no one can grudge him the many advantages he secures for his country and people.

This brief summary gives some idea of the status of archaeology in several European countries, and I think we are entitled to ask our own Government whether it is aware of the importance attached to its study abroad, and is prepared to take such measures as shall bring England to some extent up to the level to be found elsewhere.

In many countries such matters come naturally under a minister, either of Fine Arts or of Public Instruction, and the suggestion has recently been discussed as to whether our salvation, at least in the matter of art, would not be found in the creation of a Ministry of Fine Arts. Before any step in such a direction is taken it seems to me that a wise course would be to make inquiry, not of the Governments of the countries in question, but of the officials who have to work under the system, and try to discover what special benefit the countries derive from the existence of a minister. It may be readily granted that there are in this country a number of men admirably qualified to hold such a post, but under our present party system there would be no guarantee that any of the men we may have in our minds would be offered the post, or any security for their tenure of it. A Minister of Fine Arts, however, would hardly control such work as I have in mind, though if created it might well be that societies such as ours would be held to be within his province.

With regard to the more immediate question, there is no doubt in my mind that its solution is to be found in the full recognition by the Government that archaeology is a subject which is becoming of great importance in education, and that this Society is the body to which its control should be entrusted, just as the Royal Society acts for the Government in all deliberations on scientific subjects. If we are to perform these functions ade-

quately, a grant of money is a necessity, as again in the case of the Royal Society, and I trust the Council will think fit to press this view in the proper quarter.

Finally, I have been asked to make a correction in the address which my predecessor in this office delivered in 1907. In that address it was stated that the 'Kernoozer's Club' was believed to be extinct. The President of the Club, Sir James D. Linton, has written to say that such is not the case, but that since its foundation in 1881 the club has regularly held its sessions and continues to exist in full vitality, with promise of an extended career of popularity and prosperity."

The following Resolution was thereupon proposed by Arthur John Evans, Esq., D.Litt., F.R.S., seconded by Professor John Linton Myres, M.A., and carried unanimously:

"That the best thanks of the Meeting be given to the President for his Address, and that he be requested to allow it to be printed."

The President signified his assent.

The Scrutators having reported which Members of Council in Balloting Papers no. I and no. II, and that the Officers of the Society in Balloting Paper no. III, had been duly elected, the following list was read from the Chair of those who had been elected as Council and Officers for the ensuing year:

Eleven Members from the Old Council.

Charles Hercules Read, Esq., LL.D., *President*.
Philip Norman, Esq., LL.D., *Treasurer*.
Sir Edward William Brabrook, Knt., C.B., *Director*.
Charles Reed Peers, Esq., M.A., *Secretary*.
Charles Angell Bradford, Esq.
Philip William Poole Carlyon-Britton, Esq.
Alfred Heneage Cocks, Esq., M.A.
Arthur John Evans, Esq., M.A., Litt.D., F.R.S.
Francis John Haverfield, Esq., M.A., LL.D.
Sir Henry Churchill Maxwell Lyte, K.C.B., M.A.
William Howard Aymer Vallance, Esq., M.A.

Ten Members of the New Council.

David Lindsay, Lord Balcarres, M.P.
John Bilson, Esq.
Harold Arthur, Viscount Dillon, M.A.
Sir George James Frampton, Knt., R.A.

Major William Jesse Freer, V.D., D.L.
 Lt.-Col. William Hawley.
 William Richard Lethaby, Esq.
 William Minet, Esq., M.A.
 Edward Schroeder Prior, Esq., M.A.
 Lawrence Weaver, Esq.

Thanks were voted to the Scrutators for their trouble.

Pursuant to the Statutes, chapter iii, section 3, the names of the following, who had failed to pay all moneys due from them to the Society, were read from the Chair, and the President made an entry of amoval against each name in the Register of the Society :

John Starkie Gardner, Esq.
 Rev. Edward Augustus Bracken Pitman, M.A.

THURSDAY, 4th May, 1911.

PHILIP NORMAN, Esq., LL.D., Treasurer, in the Chair.

The following gifts were announced, and thanks for the same ordered to be returned to the donors :

From the Dean and Chapter of Canterbury :—A catalogue of the manuscript books which are preserved in study X.Y.Z. and in the Howley-Harrison Collection, in the Library of Christ Church, Canterbury. Compiled by C. E. Woodruff. 8vo. Canterbury, 1911.

From the Author :—The History of a Bedfordshire family, being a history of the Crawleys of Nether Crawley, Stockwood, Thurleigh, and Yelden in the county of Bedford. By William Austin. 8vo. London, 1911.

From the Author :—St. Thomas's, Pendleton, in the borough of Salford. History of endowment. List of churchwardens, 1776-1911. By Rev. W. A. Westley. 4to. Pendleton. n.d.

From Philip Norman, Esq., LL.D., Treasurer :—An engraving after a drawing by Fairholt, representing a Meeting of the Royal Antiquarian Society, Somerset House, 1839.

From the Author :—Iron : its worker, and some of his work. A brief history of ornamental ironwork. By A. P. Witchell. 8vo. Westminster, 1911.

From Harold Sands, Esq., F.S.A., M.I.Mech.Eng. :—The handbook to the Roman Wall. By J. Collingwood Bruce. Sixth edition. Edited by Robert Blair. 12mo. Newcastle-upon-Tyne, 1909.

REGINALD SMITH, Esq., F.S.A., read a paper on specimens of a large series of flints exhibited by the Associated Portland Cement

Manufacturers of Northfleet, Kent. For the last four years palaeolithic implements and flakes, as well as remains of the pleistocene fauna, have been found in the deposit capping the chalk in a corner of the Southfleet pit; and the flints are clearly separable into two classes. The first consists of flakes and cores of large size, unrolled, and in some cases unpatinated, indicating an extensive factory at this spot of implements of Le Moustier type, flaked mainly on one face. This constitutes about 99 per cent. of several thousand specimens; and the remainder comprises implements of Chelles and St. Acheul types, mostly rolled and patinated, and evidently not *in situ*, but swept from the 90-ft. terrace-gravels above, and carried over the site of the factory by a torrent of sandy mud that reached its present level (about 45 ft. o.d.) over a frozen surface sloping gently to the river. The deposit on the chalk is pronounced by Mr. Clement Reid to resemble the Coombe-rock or Elephant bed at Brighton, in which only one implement has been found; but many specimens of Le Moustier period have been found in a corresponding deposit on the French side of the Channel, at Sangatte, near Calais. If the ground were frozen several feet deep and a sudden thaw set in accompanied by heavy rainfall, a tumultuous mass of mud and stones would pass from the high ground of the Downs towards the sea; and, in the opinion of Mr. E. T. Newton, the animal bones (mammoth, red-deer, horse, and rhinoceros) point, like the flints, to a date before the end of the Ice Age. Britain at that time had not been finally severed from the Continent, and the resemblance between the Northfleet and Sangatte deposits suggests that the Coombe-rock is not long subsequent to the beginning of the period named after Le Moustier.

Mr. WHITAKER welcomed a full description of the interesting find at Northfleet, but thought there might be still more to do in the neighbourhood. The deposit in question was lower than the terrace at Northfleet, which was represented round the corner to the north-east of the pit. Some older implements had evidently been left behind, and incorporated in the later deposit; and he was not astonished to find specimens of Galley Hill type in that bed, which was in the position of the middle Thames terrace. Perhaps the deposit capping the chalk was the representative of a lower terrace-gravel. Further uphill a peculiar deposit had been cut into, looking like London Clay, resting on the higher terrace. There was evidence of land-slides in the immediate neighbourhood, and there was no reason to suppose that similar movements did not take place lower down. Whether these movements were local or general was another question. He had noticed in Baker's Hole not only a chalk deposit but also

little nests of yellow shelly sand, resembling that shown in the higher gravel to the north-east; and an extension of the working might show land and freshwater shells of fairly recent date. This deposit had not been noted by himself years ago on the geological survey map because there were then no sections available and no evidence of its existence, the surface being clayey. The cement company had done wisely in preserving such a large number of implements, which must be seen in bulk to be appreciated. He thought the author had somewhat under-estimated the powers and results of English investigators, whose cautiousness was perhaps a national failing, but saved them from the rather fanciful classifications and chronologies current on the Continent. What were regarded as signs of different ages might simply be the result of divergent conditions in one period. As to the age of the implements, he thought all were post-glacial, at least locally, inasmuch as on the opposite bank of the Thames there was a mass of Boulder Clay with the earliest gravel resting on it and cutting it off. The fossil evidence might be contradictory, but one could not gainsay such geological facts. The climate might have been cold when the flints were covered up, but could not properly be termed glacial. Present classifications might have to be altered in a few years, and he strongly advised investigators to proceed with caution and keep their classification as simple as possible.

Mr. CLEMENT REID thought the special importance of the find was that a peculiar type of implement was abundantly represented in a deposit as to the age of which there could be little doubt; and he was much interested in the relation of the Coombe-rock to the slopes and terraces of the Thames. It seemed to him that a flattish channel had cut at right angles across the terraces which could be traced both on the east and west of that line, but not where the Coombe-rock occurred. The latter deposit had ploughed through the terraces and was later than any of them. It was a pure accident that the Coombe-rock here occupied the position of a terrace, its tumultuous mass being quite different from a valley deposit. It was singular that implements had not been found elsewhere in Coombe-rock, though search had been made for them. At Portslade he had seen a rockery containing six elephant teeth all in a very decayed condition as found; they had evidently been derived from an older deposit or been lying exposed for a long period before being swept into the Coombe-rock. The rock fauna consisted mainly of elephant and horse, with a few rhinoceros bones and teeth. The geological survey of the Northfleet neighbourhood had not yet been revised, but he had noticed west of London somewhat similar

deposits cutting across the terraces and down to the Thames level. The deposit testified to an arctic climate, and the Northfleet flints might have been produced by a single family, the population being at that period very scanty, and the dry cold minimizing the food supply. Probably small hordes settled here and there, as in Greenland at the present day. He was not prepared to accept the elaborate correlations by various authorities that had been shown on the screen, the evidence being in his opinion insufficient to warrant such precise deductions.

Mr. DALE congratulated the Society on receiving a clear and accurate account of such an important discovery, and welcomed the co-operation of distinguished geologists in the elucidation of the problem. Such help was necessary if stratigraphy was ever to furnish a key to the stages of palaeolithic times. He endorsed the suggestion that the Society should undertake some work in this connexion, and agreed that England had in recent years fallen behind the rest of Europe in regard to prehistoric research. Collectors were puzzled by the mingling of forms and deposits, and found it impossible to assign their finds to distinct horizons, the types called Chelles, St. Acheul, and Le Moustier all occurring in our gravels. The bulb of percussion which was said to have been noticed on flints from an eocene bed was still the sheet-anchor of flint collectors, though in itself not absolute proof of human work; for instance, he knew of bulbs that had been produced naturally by pressure in a deposit at Runton, Norfolk.

Mr. GARRAWAY RICE had recently acquired among other flints from Ospringe some worked flakes, which he exhibited, with unusually large bulbs of percussion, like those from Northfleet. The two sites were only 25 miles distant from each other, and the same industry might be represented by the finds. The system of purchasing implements from the workmen at various pits made scientific investigation practically impossible; and he looked forward to some steps in this direction being taken by the Society.

The CHAIRMAN commented on the care and industry displayed in the paper, which dealt with what at first sight was an unattractive subject. He had always had great respect for palaeolithic man, who showed himself an artist in more than one medium. Even in a stone implement there was an artistic sense and fineness of line that was not to be found in neolithic work. As to the backwardness of this study in England, he thought there were changes of fashion in archaeology as in other pursuits, and a cycle of papers on prehistory might soon be anticipated. Forty



WORKED FLAKES FROM OSPRINGE, KENT ($\frac{1}{2}$)

years ago Sir John Evans and Lord Avebury had been among the leaders of the movement for the recognition of prehistoric man and the study of his works.

Thanks were ordered to be returned to Mr. Smith for his paper, which will be printed in *Archaeologia*.

THURSDAY, 11th MAY, 1911.

CHARLES HERCULES READ, Esq., LL.D., President,
in the Chair.

The following gifts were announced, and thanks for the same ordered to be returned to the donors:

From Professor Firth, LL.D., F.S.A. :—Facsimiles of three unique broadsides, viz. (1) The Spectator and his 24 Tenants; (2) England's Great Joy and Gratitude express'd to the King and Parliament for passing the Bill for the more Effectual Employment of the Poor, and Incouragement of the Manufactures of this Kingdom; and (3) A ballad entitled 'A proper new Ballad, showing a merrie iest of one leamie of Woodcock'.

From T. H. Fosbrooke, Esq.:—Eight photographs of plans, elevations, and sections of Ashby de la Zouch Castle, Leicestershire.

The PRESIDENT announced that he had nominated David Lindsay, Lord Balcarras, M.P., to be a Vice-President of the Society.

W. H. ST. JOHN HOPE, Esq., M.A., read a paper on the discovery of the remains of King Henry VI in St. George's Chapel, Windsor Castle, on November 4th, 1910. When the quire aisles were repaved in 1789, several graves were discovered, including that of King Henry IV, which was opened and examined. That which tradition had always pointed out as King Henry VI's was also found, under the second arch on the south side, but was not allowed to be opened. As there had long been a doubt as to where King Henry's remains had actually been buried on their removal in 1484 by King Richard III from their first resting-place in Chertsey Abbey, the traditional site at Windsor has lately been examined, with the approval of the King, in the presence of representatives of the Dean and Chapter, the Provosts of King's and Eton, and others. Under the second arch in the south aisle there was found a small leaden chest, 3½ ft.

long, in a full-sized brick vault, with the iron bands and other remains of a large wooden coffin in which it had been placed and buried. On the leaden chest being opened, a wooden box with a sliding lid was found within, which contained the remains of a human body with traces of silk wrappings. These remains have been examined by Prof. Macalister, and pronounced to be those of a fairly strong man, between forty-five and fifty-five years old, and at least 5 ft. 9 in. high. The bones of the head were much broken, but belonged to a skull well formed, but small in proportion to the stature. Nearly all the bones of the trunk remained, also those of both legs and of the left arm, but no part of the right arm (perhaps because it had been retained at Chertsey as a relic). The body had evidently been dismembered when put in the box, and had every appearance of having been buried in the earth for some time, which in King Henry's case was thirteen years, and then exhumed. The state of the bones was too unsatisfactory to allow of any trustworthy measurements being taken. After the remains had been completely examined they were again closed up in the leaden chest, and replaced, with everything found with them, in the grave, which was then filled up as before with dry rubbish.

Mr. Hope quoted various historical and documentary notices of the king's burial at Chertsey, the exhumation and removal of his remains to Windsor, and the abortive efforts to translate them to Westminster; and despite the fact that nothing was found in the grave to indicate their identity specifically, he claimed that there was no other person than King Henry VI recorded or known to have been buried in St. George's Chapel to whom remains enclosed in so remarkable a way could possibly belong.

Mr. C. L. KINGSFORD said there was some doubt whether Henry VI died a violent or natural death, and also whether he died on the date given; but the evidence was in favour of his murder on 21 May. A chronicle of 1513 mentioned this transfer of his remains to Windsor 'where he now lies buried'.

Mr. J. G. WOOD held that burial under the arch was significant. The will of the Earl of Durham in 1469 directed that he should be buried under the arch at the abbey church of Abergavenny, and burial in such a position must then have been considered a mark of dignity.

Mr. BARRON inquired whether Prof. Macalister had remarked on the traces of blood in the hair, as that might throw light on the mysterious death of Henry VI.

Dr. Cock cited the case of Charles I in connexion with the persistence of blood, which might be in the state of coagulum or in solution. The present subject might have died of some inflammatory disease and bled after death; it was not at all unusual to bleed for several days after death—witness the case of Henry VIII, who was said to have bled two or three nights running. There was nothing to show whether the clot was *ante* or *post mortem*.

Mr. Hope agreed, in reply, that only notable persons were buried under arches in a vault, and quoted the case of Duke Humphrey among others. The blood might or might not indicate murder, but a still more important question was whether the remains were really those of Henry VI; and if silence gave consent, he concluded that the meeting endorsed his own views. The bones had been put into a wooden box, sealed up, put into a large coffin, and placed in a vault as though the deceased were a person of distinction. St. George's Chapel was not a private church and burials in it were duly recorded; and in his opinion there was no doubt as to the identity of the burial.

The PRESIDENT said a paper with such a title was bound to have a romantic interest. He would like to think the remains of Henry VI had come to light, but confessed that the evidence was mostly negative. A process of elimination was not the most satisfactory method in such circumstances. It was curious that a king's body, removed from Chertsey to Windsor with all due reverence and ceremony, should not have all the bones of the skeleton. But to point out the inadequacy of the evidence was of little use if no alternative could be suggested. Among the bones described was that of a pig, which reminded one of early British burials, in which that animal was so frequently represented. It was just possible that the tradition was not quite lost at the time of the burial at Windsor, and some peasant may have slipped the bone into the coffin as part of the ceremony. He was not sure that Mr. Hope should interpret silence as consent: time should be allowed for further research and possibly for additional discoveries.

Mr. Hope's paper will be printed in *Archaeologia*.

The Reverend H. G. O. KENDALL, M.A., communicated the following paper on Palaeolithic Periods at Knowle Farm Pit:

"Professor Commont, of St. Acheul, after prolonged study, has determined that five or six different palaeolithic industries are patent among the flint implements which have been dug

from the clay and gravel pits there and in that neighbourhood. Near the base of the lower gravels, which are contiguous to the chalk, are found the rudely worked and roughly pointed implements of an early Chelles or pre-Chelles period (pl. I, figs. 2-4, pl. II, fig. 8). In the upper part of the same series of gravels lie the *coups de poing* of the Chelles period (pl. II, figs. 5, 7). These are sometimes pointed, sometimes ovate, and have a considerable thickness and, generally speaking, sinuous edges. In characteristic specimens the original nodule of flint has been worked with some thoroughness, but regard is always had to a good hand-grasp.

The lower series of gravels are surmounted by a middle series. The gravels and red sand at the base of these contain the chipped flints of the St. Acheul I industry. The typical implements are flat and ovate, with straight edges. The flaking is good and the retouching at the edges shows fine workmanship. The colour is often red or yellow.

In the upper part of this series is the red foundry sand. It contains finely worked lanceolate implements with a white patina, to which the professor gives the name of St. Acheul II.

The remaining strata, lying above the last mentioned, yield implements and flakes of Moustier and Madeleine ages, with which we need not now concern ourselves.

At St. Acheul the quaternary strata frequently overlies one another horizontally and unconfused. At Knowle Farm Pit, on the other hand, the gravels are often very much involved. This has been especially the case in the earlier years of the digging of the pit; at least when once the river silt near the surface had been dug through. The beds surmount the chalk, the surface of which is exceedingly irregular. They lie at the shoulder or upper part of the bank of a dry river valley the course of which may be traced back, through Savernake Forest, to the foot-slopes of Martinsell, to a height of 600 ft. or more above o. d. In its downward direction the valley connects with the Shelburne brook, which a little lower down runs into the River Kennet. The bottom of the valley at Knowle is 420 ft. above o. d.; the surface of the ground at the pit is about 470 ft. above o. d., and the beds are sometimes as much as 20 ft. deep.

Of late, stratification has been more evident. Indeed, for some years past three beds have been apparent. Sometimes their line of junction is, it is true, ill defined, but occasionally it is clear. They vary, respectively, in thickness to a considerable degree; and, since the first opening of the pit, they have probably been found much involved in some part of every section.

In digging the pit, the workmen have begun at the old river bank and have cut back, as it were, inland. At the base of



PLATE 1

PALAEOLITHIC IMPLEMENTS, SAVERNAKE FOREST ($\frac{1}{2}$)

Fig. 1. Much abraded and striated.

Figs. 2-4. From the lower gravel.

sections which have been lately exposed may be seen sometimes about 6 ft. or 8 ft. of lower gravel consisting of thin seams of stratified material which is frequently of a blackish and tawny colour. It contains flints of various sizes, but small on the average.

Surmounting these is red gravel, perhaps 6 ft. or less in depth. The matrix is sometimes red clay, at others it consists of red clotted sand. Some patches and streaks are of a much paler colour. It is occasionally very hard. Above this is fine, pale river silt with flints of various sizes. It is intercalated sometimes with thin seams of red clayey sand and flints. The river silt tends to thin out towards the top of the bank.

By far the greater number of implements were dug, in the early days, from the river silt (pl. II, figs. 1-4) and the red material underlying it. The larger number of a series of these show on their flaked surfaces the natural colour of the flint.

The number of implements and rudely chipped pieces which have come from the pit is immense. I have reckoned that the total number of the former is above 10,000. About 2,000 have passed through my own hands. Now that the pit has been dug some distance away from the old bank, the proportion of stained implements of early type is large, whilst those of latest type and condition have almost ceased to occur.

Professor Comont, after being given the above details, was of opinion that the gravels bear evidence of a long and practically continuous occupation of the site by man; and a prolonged and arduous study of the implements and their surroundings leads me to the same conclusion.

The series which is exhibited on the table includes implements which are shown to be of very different periods by the rechip-pings on certain specimens, as well as the widely different workmanship and mineral condition. Yet, in going through them stone by stone, it is exceedingly difficult to say where one period begins and the other ends.

The implements are divided into groups, suggestive of the various successive periods.

Group Ia shows a very great amount of abrasion and striation, and generally considerable thickness. Some are reduced almost to pebbles. In some instances the primary flaking is comparatively good, and several flakes show subsequent chip-pings corresponding to Groups II and III.

The implements in Group Ib are rather less abraded and striated. One has chipped surfaces of no less than four consecutive periods, though there is but a single chip of the fourth. The earliest surface on the outer face is dark brown, abraded and much striated, and belongs to Group Ib. The inner face

is somewhat abraded and striated, and is red-brown, as Group II. Along one edge of the implement are greenish-yellow, slightly abraded chippings of Group III. Upon them, near the base of the implement, is a single chip of yet later date. Its surface is unabraded and of the natural colour of the flint.

Group II shows implements of very varying excellence. All are abraded and some are striated: but less so than those of the preceding group. They are the *coups de poing* of Prof. Commont's Chelles period, gradually improving till they issue in transitional implements which foreshadow the flat ovate *limande* of the St. Acheul I period. Commont has figured implements which in style he regards as transitional. No. 41 would be of these (pl. I, fig. 3).

Group III contains specimens of the flat ovate implement with an edge all round, the St. Acheul I *limande*. They are but very slightly abraded and sometimes are very finely retouched. A number of the stones exhibited were dug out by myself *in situ*. Among these was no. 45, which I took out with my fingers from the upper part of the lower gravel.

The implements in Group IV a have red clayey sand adhering to them, are unabraded and but little altered in colour (pl. II, fig. 6). They may represent the beginning of the St. Acheul II period.

Of Group IV b some stones have evidently lain in red material, but they cannot have been at any depth in it, inasmuch as they have been torn out of it and deposited in the silt with scarcely any signs of abrasion. Others have perhaps never been in anything but river silt. Their style marks them out as St. Acheul II. The chipping is often very fine, and there are a large proportion of very small pointed implements which Prof. Commont has identified as of the type of La Micoque. I have taken out a number of these unabraded implements from the river silt *in situ*.

Tiny implements, minute flakes, and chipped pieces may be found at all depths at Knowle, but they have been immensely abundant in the river silt. An almost incredible quantity of trimmed flakes, rude chipped pieces, fabricators, &c., of normal size, have come from the river silt. Besides examining the heaps in the pit, I have dug out many yards of it including quantities of these. A small series of the microliths and rude chipped pieces is on view, together with four specimens of rudely chipped flints from the lower beds.

Scrapers of horseshoe shape seem to be common to all the ages, but are, of course, most abundant in the latest. Three of these are exhibited.

In comparing the Knowle implements with those from other



PLATE II

PALAEOLITHIC IMPLEMENTS, SAVERNAKE FOREST ($\frac{1}{2}$)

- Figs. 1-4. From the silt,
Figs. 5, 7, 8. Lower gravel.
Fig. 6. Middle clayey gravel.

sites, it should be remembered that the flint obtainable by the Knowle men was of an intractable nature and the nodules were comparatively small. It may be added that no intention is held of limiting the possible number of periods at Knowle to four. Some of the periods seem to have been very long and may eventually prove to be subdivisible. But an endeavour has been made to work out the broad lines upon which the classification of successive industries at this site may be begun, and to show that they are similar to those of Prof. Combert at St. Acheul.

The suggestion has been made that some notes might usefully be added on the striae and the gloss which appear on many implements at Knowle Farm Pit. I believe that flints of such highly glossy appearance are not known to occur in any quantity anywhere else in the world. A gloss of similar appearance, but never of quite the same intensity, may, however, be seen on palaeolithic implements from the banks of the Zambesi in the Pitt-Rivers Museum at Oxford. Single specimens or small groups with a considerable amount of gloss (but never equalling the best from Knowle) do occur in some places, as e.g. (a) a derived palaeolithic implement from Baker's Hole, Northfleet, recently exhibited at the Society's rooms; (b) a flint with ancient fractured surfaces, picked up by myself at Kimpton, Herts.; (c) a pebble which had become wedged between rocks in a waterfall in Wales; (d) Dr. Blackmore has found flints still partly imbedded in the chalk in the Margate gap, of which the imbedded portions are dull, whilst those parts which have projected for some time from the chalk face are highly lustrous or glossy; (e) Professor Flinders Petrie has brought sickle flints from Egypt of which the exposed portion is glossy by reason of constant rubbing against the fractured ends of corn stalks (the stalks would often be dusty, and possibly contain silica); (f) the President of the Society has referred to stone implements 'from the United States, evidently used as hoes and incidentally polished by repeated contact with the soil'.¹

One instance (c) shows that water and sand can produce a high gloss; and the next, (d) that wind and sand are capable of bringing about the same effect. The Margate gap has been cut in historic times, and the gloss has therefore been added within the last few centuries. Other facts (e and f) go to prove that it can be produced by rubbing and pressure in combination with sand.

There are doubtless a number of other instances of isolated glossy stones. A large number of 'coliths' from the high plateau of Wiltshire and neoliths from various localities show small patches of it, sometimes about $\frac{1}{2}$ in. square, and occasionally on the

¹ See p. 463, below.

'eoliths' almost as intense as on the best Knowle specimens. On 'eoliths' from the Wiltshire downs it often occurs on surfaces that are also abraded and striated like the older Knowle implements. On a flint of 'eolithic' age from Hackpen Hill and on a neolithic flake from North Cornwall there are a number of little oblong-oval hollows in the surface of the flint where it is glossy, but none beyond that space. Another shows it both as a patch and as small 'quicksilver-like spots', evidently both produced by the same cause. Neolithic flints from Hackpen Hill bearing small patches of it sometimes show white lines and striae as well.

Patches of gloss and quicksilver-like specks on some Knowle implements render it probable that both are due to the same cause. Like the larger patches of gloss, the spots occur sometimes on a projection, sometimes in a hollow. On flints with very high gloss the ridges are very much blunted and smoothed.

Large quantities of glossy flints have been found in a stratum of dark red clayey gravel belonging to the middle bed at Knowle, and a number of glossy stones in my collection have a red clayey matrix in the hollows. The clay is sometimes rather sandy, and contains, besides very small sand grains, some fragments of quartz of the average size of a pin's head. It is possible that these quartz grains played a part in glazing the stones.

I have taken out glossy stones *in situ* in all three strata. As some of the sharp black chipped flints from the bottom of the gravel have it, it is manifest that some of the gloss, at any rate, came on the stones subsequently to the period (probably St. Acheul I) when these flints were chipped. The sharp implements of fine make, and often grey flint from the river silt, which I regard as being St. Acheul II, are usually dull and non-lustrous. Two specimens, however, both in the Devizes Museum (one with fine river silt adhering when I received it), have patches of gloss on their faces. It is not necessary that it should all have come on in one period. Indeed, one specimen has a considerable gloss at one corner, and adjoining it a later fracture, the surface of which is less glossy. One flint in my possession has a hole, like the base of a tumbler in shape, half full of the red material and quartz grains. It is difficult to think that the sides of this hole could have been rendered glossy by either blown sand or sand washed by water.

There seem to be difficulties in the way of every solution of the question, and it is with diffidence that one proffers a fresh one. But the above considerations incline me to the idea of pressure having been exerted. It is possible, or even likely, that there is more than one cause for lustrous and glossy surfaces on stones from various localities. The gloss covers the deep scratches found on the older flints. On the other hand, certain lighter

scratches appear to my eye to have been made upon the glossy surfaces. If pressure, in conjunction with very fine sand, be the true solution, it might well have been exercised by ice or ice and water moving over the lower gravel. The sandier parts of the lower gravel, as of the river silt, contain grains of extreme fineness. This may be one reason for the gloss being found at Knowle Farm Pit in particular.

The same agent, pressure exercised by moving ice, or even deep snow sliding off the land, may account for the small shiny patches and specks on the 'eoliths' and neoliths. It would not need an Ice Age to produce these specks and the scratches found on neoliths. The climate may have been a good deal colder in the neolithic age, during winter, than is generally supposed. As Palgrave¹ points out, it would appear from contemporary sources that the winters of the Norman era in England were equal to those of Canada in modern times. In the winter of 1881 many lives were lost on Hackpen Hill and the ridge of downs which forms its continuation northwards. I am told that the body of a man lost on Hackpen Hill was found weeks afterwards washed down 300 ft. lower and nearly half a mile distant from the scene of his death. Snow, ice and water, sometimes with an admixture of stones and mud, would be capable of pressing and rubbing stones against each other so as to cause smooth and shiny surfaces, other circumstances being favourable. What are those other circumstances? One of them may be the presence of quartz grains. These would not be universally distributed, and the gloss and striae do not appear regularly. The quartz would, when sharp, scratch the surface of flint, and when rounded would smooth it.

I am strongly inclined to think that another circumstance favourable to the production of a glossy surface is the presence of iron. I have collected from the top of Hackpen Hill quantities of chipped flints with a yellow stain upon them. Some of them are of 'eolithic' style, with trimmed edges only. Others are distinctly flaked, like the face of a palaeolithic implement. They are sometimes re-chipped on older flaked stones, and are, therefore, by no means the oldest. They are slightly abraded and are striated, often more on one face than on another. In this case, the less abraded and striated face will be dull, the other lustrous. Adhering to the facets caused by man's handiwork, as well as to the crust, are lumps and patches and specks of ferruginous material. Some of these have a rough surface, and others, as for instance on a ridge, have the appearance of having been rubbed and smoothed. In other instances most of the material has been rubbed off, leaving only a few specks where was previously a patch. The iron, where it has been rubbed, is somewhat shiny, and the

¹ *History of England and Normandy*, vol. iii, p. 326.

surface of the flint from which the iron has been rubbed off is more shiny than the surrounding surface of the flint.

The striae would seem to be the work of ice pressing hard grains, e. g. of quartz, over the face of the flint, and, where the ice-surface was smoother, it would rub the iron, sometimes removing portions of it and often grinding it over the face of the flint, turning the latter lustrous. The lower gravel at Knowle Farm Pit is often very black, with iron manganese. The same operation has, to my mind, taken place there also. Mr. Worthington Smith¹ records the fact that the London forgers, to give lustre to their forged implements, rubbed them all over with a very hard brush. 'The result was an excellent and natural-looking lustre or polish.' They reproduced the quicksilver-like specks 'by forcibly rubbing a small stone burnisher on suitable places'. No doubt rubbing and pressure alone are sufficient, in many instances, to account for lustre or gloss, but the evidence of the yellow Hackpen flints seems to show that it was more readily produced when iron was present; and the iron may well be a contributory cause of the intensity of the gloss, in great quantity at Knowle and in small patches on the North Wiltshire downs. There is evidence of iron manganese being a factor in the production of highly lustrous surfaces on flints in my possession from gravel at Hatfield. The same phenomena are observable at other sites also.

To sum up, I would attribute lustre and gloss and the quicksilver-like specks to a combination of pressure and rubbing, fine sand or sandy clay, and iron.

Dr. Sturge, as is well known, attributes many of the iron stains on neoliths to the presence of iron pyrites during a time of glacial conditions. Perhaps the lustre on the flints of this age is sometimes due to ice pressure in combination with fragments of iron pyrites.

The striae on the Knowle flints, and, it may be added, on flints of undoubted human workmanship from Hackpen Hill and of 'eolithic' age, are often accompanied by points of impact, such as cover the surface of flints that have been borne by violent waters. Sometimes one of these is in the midst of a scratch, and has the appearance of having been brought about by the same agent. Some striae are very deep; others appear to be comparatively broad white surface marks; and others, again, are mere hair-like scratches. All these remarks apply to both Knowle palaeoliths and Hackpen 'eoliths'. The white marks are sometimes curved, both on neoliths and on older stones; the deep scratches and the hair-like ones are usually straight. The striae, both on Hackpen neoliths and 'eoliths' and Knowle palaeoliths, are closely associated with crushed or torn and sometimes smoothed

¹ *Man, the Primeval Savage*, 296.

ridges, and with facets of ordinary lustre as well as with more distinctly glossy ones. One 'eolith' from Hackpen Hill has an extraordinarily smooth surface and very numerous striae. Both straight and curved striae are found on the same flint. The very fine scratches are often short and in parallel lines. The striae (or some sets of them) are subsequent to some periods of chipping, prior to others, as rechippings prove.

It is a remarkable fact that some of the Egyptian palaeolithic implements are striated. The surfaces show a rich red colour mingled with black. The latter colour appears to be due to the presence of iron manganese. The red and black surfaces of these palaeoliths are almost exactly duplicated by those on some of the oldest chipped flints from Hackpen Hill. From this I infer that if the red colour on the former is due to long continued and excessive sunburn, the condition of these Hackpen flints must be referred to the same cause. This takes them back, presumably, to the Tertiary period when the climate in the South of England was sub-tropical."

Mr. REGINALD SMITH was glad to find that Mr. Kendall had not confined his attention to collecting specimens, but had devoted considerable time to the examination of the strata. The pit was on the side of a dry coombe about 450 ft. above the sea, and an official report on the geological position¹ stated that the valley had been lowered 40 ft. since the deposition of the gravel in which the implements were found. The deposit was not a terrace-gravel like that in the Thames Valley, nor was it a plateau-gravel like the widespread deposit independent of the present river-system that might be seen, for instance, in Herts. If it was due to the melting of an ice-sheet or glaciers north of the Thames (south of which Boulder Clay did not occur), the implements clearly dated from the Ice Age, and the innumerable scratches on many specimens from the pit might possibly be thus explained. Another characteristic of the series was the extraordinary gloss on many of the worked and unworked flints. It was at present uncertain whether this was due to a change in the surface or to a chemical deposit, and it rested with the chemists to decide between the many explanations that had been brought forward.² It was in any case clear that the gloss had been produced after the flints had been fashioned by man, but the change might have taken place before, during, or after the deposition of the gravel. In the present case he was not prepared to recognize a

¹ *Summary of Progress for 1902* (Geological Survey), 207; *Man*, 1903, no. 29.

² *Wills. Arch. Mag.*, xxxiii. 134, 143, 144; xxxiv. 145; *Man*, 1906, no. 76; *Journal of Anthropological Institute*, N.S. iv. 313.

sequence of classical types such as those found by Professor Comont: the whole series might well belong to the St. Acheul period, the rougher work on some of the specimens being perhaps due to the intractable nature of the local flint, which could be easily recognized—a spotted grey with buff or brown crust, almost crystalline in texture and not conducive to long, clean flaking. The wonder was that so many of amygdaloid form with more or less curved edges were present, showing a close connexion in date and culture with the middle series of beds at St. Acheul. According to most authorities these deposits preceded at least one of the major glaciations (Würm), and he commended the study of Knowle Farm Pit in this light to the geologists.

Mr. DALE saw no objection to the view that the gravel was deposited under glacial conditions. Till recently the metamorphic rock called blue-stone had been looked upon as transported material, but in Professor Judd's opinion boulders of it had been left behind as the wreck of the Ice Age. As to the silica deposit on the flint, was that due to decomposition of the stone setting the silica free? Bright specks of silica were often seen at the points where flints had come into contact; and the gloss had evidently been produced after the flints had come to rest in the gravel. The patination of flints was a difficult question, specimens sometimes differing widely in neighbouring pits; and iron was probably the determining agent. Work so delicate as to be visible only under the glass was probably due to use; and he was not prepared to accept the correlation with St. Acheul. The French classifications were attractive enough, but in England the same uniformity was not observable in the pits, and a definite classification was therefore misleading. Some of the exhibited specimens seemed to him natural, but he was obliged to the author for bringing the contents of a most prolific pit to the notice of the Society. Terraces were the best means of dating implements, but it would be interesting to hear of any mammalian bones or other remains at Savernake. In the New Forest and the Isle of Wight the plateau-gravels could be clearly distinguished from the river-terraces and were never implementiferous.

Mr. KENDALL replied that the questions of gloss and scratching, as well as the geology of the pit, had been purposely omitted from the paper, as they had been discussed in recent years, and he had therefore assumed a general knowledge of these points. His object had been to deal with the periods observable in the Knowle Farm Pit, as that was the question of the hour; but he agreed that the other matters mentioned all had a bearing on the classification. At one time a large number of glossy speci-

mens could be found on the gravel-heaps in the pit, and they were observed to occur abundantly in deeply ochreous clayey gravel in the middle of the section. In Dr. Blackmore's opinion it was due to the action of blown sand, but Dr. Sturge insisted on the presence of water and sand. He himself thought it had been produced by the same agent that smoothed the stones, reducing some to pebbles, and scratching many in the process. A river of ice containing fine and coarse sand would be such an agent, the same stones sometimes showing both gloss and scratches; but ice could not have pebbled the flints, and there must have been also water at work. Drainage from hills bordering the Vale of Pewsey would pass down Knowle Valley. The pitmen asserted that the sharp black implements came from the lower gravel not far above the chalk. Implements of local fabric seemed to be of early St. Acheul types, and the chalk immediately below the gravel had a band of flints with thin crust. Some of the exhibits might be regarded by some people as doubtful, but the workmen had a very keen eye for human work. It would probably be admitted that, of the very much abraded specimens, some, at any rate, had been chipped by man. Nothing beyond the flints came from the pit, the black layer assumed to be a fireplace being more probably vegetable material. He had found perfect palaeoliths deeply stained and striated, sometimes abraded, on Hackpen Hill, eight miles from the pit and 870 ft. above the sea, the nearest valley being a mile distant and 370 ft. lower.

The PRESIDENT remarked that to many people stone implements remained unattractive, but imagination applied to the study produced extraordinary enthusiasm, and Mr. Kendall was himself an excellent example of thorough devotion to the subject. It was curious that the *locus classicus* should still retain its pre-eminence, for St. Acheul had been among the first implementiferous sites discovered, and was at the present time providing Professor Commont with a basis of classification. He thought with Mr. Dale that the French system did not necessarily apply to our own gravel-deposits, but would accept the terminology if only to make observers mutually intelligible. Whether the same types were contemporary wherever found was still an open question. He agreed with Mr. Smith that some of the rudest implements exhibited had been derived from other localities; and if they had rolled only in one direction, must have come from a considerable distance to be reduced almost to pebbles. In any case they were not made on the same spot or under the same conditions as the bulk of the Knowle Farm implements. As an illustration of gloss he quoted some specimens from the United States that had been evidently used as hoes and incidentally

polished by repeated contact with the soil; and sand or earth passing over the surface seemed the most likely agent in palaeolithic cases.

Thanks were ordered to be returned for these communications.

THURSDAY, 18th MAY, 1911.

CHARLES HERCULES READ, Esq., LL.D., President,
in the Chair.

Notice was given of a ballot for the election of Fellows on Thursday, 1st June, 1911, and a list of the candidates to be put to the ballot was read.

OSWALD BARRON, Esq., F.S.A., read a paper on a Grant of Arms, lately discovered among the Eton College charters, made in 1347 by Ralph, Baron of Stafford, to his cousin Edmund of Mortayn. Apart from the interest which belongs to an original document of this character, the grant offered several peculiar features. Although a crest is given with the arms, the grantee was in priest's orders, a canon of Lincoln, a parish priest, and a doctor of civil law. Also as the head of a family long bearing arms, he had no need of a new coat. The blazon was remarkable, affording, in Mr. Barron's opinion, evidence for his contention that the words 'bend' and 'baston' are interchangeable, although the latter was commonly used when the bend, surmounting other charges, took a narrow form in order to allow them to be distinguished. The grant, following mediaeval customs in such cases, was in the terms of an ordinary legal conveyance of real property.

Rev. E. DORLING believed it to be a fact that arms represented land and not blood: it was certainly the case in the early middle ages. Arms appertained to great lordships rather than to great families. One of the coats illustrated had no charge below the baston, whereas the baston was thought to be a narrow bend that would not obscure a charge below it.

Mr. BAILDON did not accept all the conclusions of the paper, and remarked on the extraordinary variety of names for the same thing: baston and bend were synonymous, and their use depended on the taste of the writer. The multiplication of terms had done much to obscure the meaning of Domesday

Book. Professor Vinogradoff¹ had collected a great number of mediaeval payments in respect of land and service and was very convincing on this point. Documents such as that described by Mr. Barron were in reality conveyancing deeds: the alteration of a few words would make the transfer apply to land instead of to a grant of arms. The reason why such deeds were scarce was that in those days land did not pass by charter, which was not an essential instrument but a mere record of transfer, the verb being always in the past tense (*dedit, concessit, &c.*).

Mr. CABLYON-BRITTON felt bound to challenge Mr. Dorling's statement as to the connexion of arms with land rather than with blood, the only case brought forward in that connexion by Mr. Barron being in opposition to that view. There was a mass of evidence against it both in this country and on the Continent. A coat of arms was the distinguishing mark of a nobleman; and though in this country peers of Parliament were alone considered noble, in reality every one with a coat of arms was ennobled. A grant of arms could not attach to the holding of a particular piece of land, and any textbook would remove all doubt on the subject. It would be revolutionary to maintain the opposite. The author had not explained by what authority or in what circumstances these arms were granted. When Lord Hoo made a similar grant, the Crown regarded it as *ultra vires*. It was dangerous for the Society to place implicit confidence in the production of a document without being able to appreciate the circumstances of the case and the special authority of the grantor. He agreed that in modern heraldic works the treatment had become stereotyped, and one was apt to forget that the mediaeval artist would adapt his charges to the shape of the shield and the materials at hand.

Mr. EDWARD BELL pointed out that in the document quoted the arms were granted to a cousin and to his heirs and assigns for ever. Would the arms pass to any person into whose hands the estate eventually came?

Sir FREDERICK POLLOCK did not pretend to any special knowledge of heraldry, but thought that all would depend on the terms of the grant and its date. He would not be surprised if people thought in the fourteenth century that a coat of arms could be assigned without the land. From analogy he would expect that people with coats of arms regarded them as property; some might claim to bear the coat when they held the land, others might regard the arms as a separate grant. The phrase 'heirs and assigns'

¹ *Oxford Studies*, vol. ii, article iv, 'Customary Rents,' by E. Neilson.

meant what it said; and the grantee and his heirs would bear the coat with as much right as the first bearer of it. If a coat of arms were granted separately, apart from the land, it would be an incorporeal hereditament, but it was uncertain whether it was ever the practice to make a separate grant. He agreed that it was dangerous to dogmatize about the middle ages, many points generally regarded as indubitable being merely figments of seventeenth-century antiquaries. Mr. Barron had rightly distinguished between the Bishop of Durham as a great spiritual lord who held the temporality of the see and as a count palatine. It was evidently as a temporal lord that he bore a crest.

Mr. CRACE held that the subject of heraldry was complicated by the regulations of James I. Since his time everything was carried out by rule and measurement, and the use of arms had become a fixed science instead of a free art.

Mr. BARRON, in reply, said that he had chosen the Archbishop of York as an illustration, as the case of the Durham bishopric was complicated by its double aspect. He had an open mind with regard to the connexion of arms with land or lordship. In the present case arms went with the land, and the Hastings case did not prove the opposite, for the question there was between an heir male and an heir general. He protested against the view that arms must be granted by a competent authority. In the Hastings case some witnesses said they were noblemen but bore no arms, others had arms but did not know what they were. In an English armorial treatise written about 1395 it was taken for granted that any man could take any arms that did not already belong to any one in the same country. Another early English writer stated that it was best to get one's arms from a prince or lord, but most men would take a coat for themselves. In the latter case, the arms were of the same authority but not of the same worship. The heralds could give no additional authority. With the exception of odd laws for ennobling foreigners, the transfer of arms always signified that land had passed, the coat going with the manor. The grant by heralds only began in the fifteenth century; before then a man took arms of his own choice or asked his lord for a coat.

The PRESIDENT expressed the gratitude of the meeting for the lucid manner in which the subject had been brought forward. The document itself was a great discovery, and was valuable not merely as a specimen of handwriting. Though despised by many learned people, heraldry was indispensable for the mediaevalist. It was another language to be learnt and led to the

solution of knotty problems in history. Its grammar had been perhaps unnecessarily complicated by ingenious scribes, who revelled in synonyms; and a glossary would be a most welcome addition to heraldic literature.

H. S. COWPER, Esq., F.S.A., exhibited (1) a skeleton clock with iron works; (2) an Elizabethan sword; (3) a roasting jack of the seventeenth century; and (4) a lead seal of the thirteenth century, on which he communicated the following notes:

"1. The iron clock (fig. 1) appears to me to be of early date, since in some ways it closely resembles Peter Lightfoot's clock, which is believed to have been made about 1335 for Glastonbury,¹ and the works of which are now in the western galleries at South Kensington.

The wheels and cogs of the clock now exhibited are of iron throughout, and the framework is wedged together without the use of a single screw. The bell has gone, but the hammer remains. The anchor escapement and pendulum are no doubt seventeenth-century additions, and I presume that there was originally a fly-wheel or balance. The works otherwise appear to me complete. The holes for the weight-chains can be seen, and it was wound by the click and ratchet arrangement, which also is found in the works of the Dover Castle clock, now also at South Kensington.

The photographs of the Glastonbury and Dover clocks show a remarkable likeness in general type. My clock has four iron supports, one at each corner, the mouldings on the bottom of which are nearly identical with those of Lightfoot's clock, and they face outwards in the same way. The Dover clock is said to be dated 1348.

The clock exhibited came some years ago from Sissinghurst Castle, near Cranbrook, one of the great Kent houses which entertained Queen Elizabeth. Sissinghurst, however, belonged to a family of Saxenhurst till about the time of Edward III, and then till the time of Henry VII to the Berhams. Its subsequent history under the Bakers is well known.

The Sissinghurst clock is only 11 in. high, and so far I have not been able to ascertain that any other small clock of this type exists; and the Dover and Glastonbury clocks appear to be the earliest existing English clocks. The peculiar arrangement of the train wheels at right angles to the face is not found in the other early clocks.

¹ Described, I think, both by Admiral Smyth and Mr. F. J. Britten as the earliest clock of which we have authentic details. See 'Supplement to the description of an Astrological Clock', *Archæologia*, xxxiv. 1-20, and *Former Clocks and Clockmakers*, 1894, p. 23.

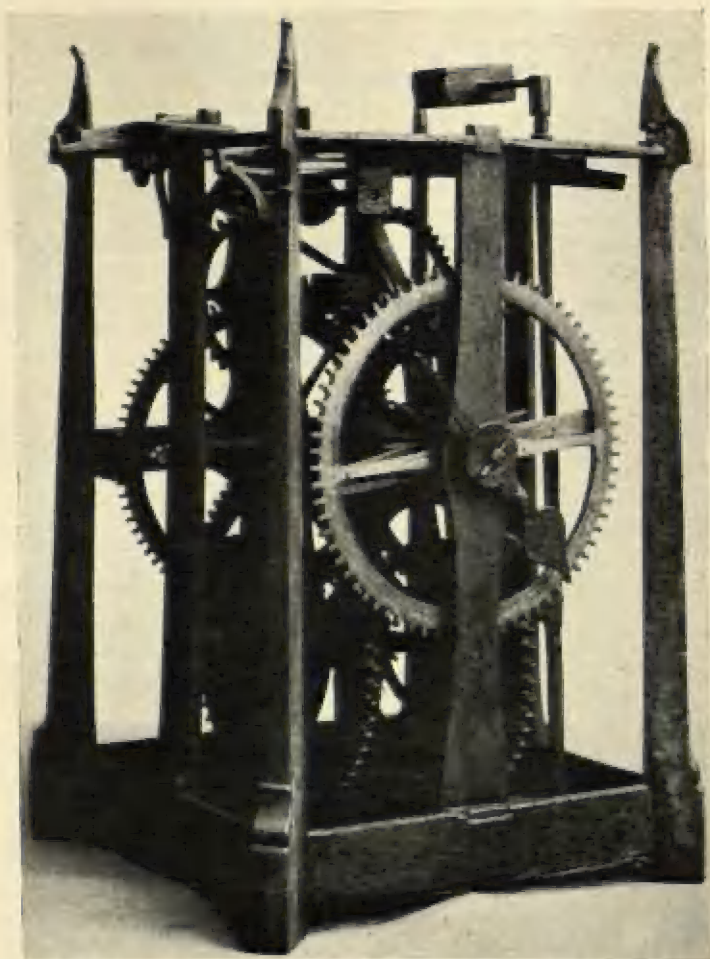


Fig. 1. SKELETON CLOCK WITH IRON WORKS.

The dial has gone, and I am doubtful if the hand is original. The framework has been painted, but the paint has been partly removed from the two front supports.

I also exhibit

2. A fine sword of about the year 1600, with handsome silver inlaid hilt. Swords of this character were exhibited by Mr. Seymour Lucas in 1888, and one by myself in 1899.¹ The one now exhibited measures 3 ft. 6 in. in total length, and the blade from tip to hilt 3 ft. As in some other cases, the hilt is English and the blade German: the latter is inscribed

FRANCZ ME FECIT
KEISSER SOLLIGEN

and though in good condition has been well sharpened. I have not come across the name of this maker elsewhere.



Fig. 2. IMPRESSION OF LEAD SEAL OF THIRTEENTH CENTURY (4).

The *motif* of the silver inlay is similar to the other swords already described in our Proceedings. The sword came originally from near Biddenden, and is said to have been for generations in the possession of the family of Witherden of that place, who no doubt were a branch of the family of Witherden of Bethersden, a pedigree of which family will be found (from 1527 to 1804) in *Archæologia Cantiana* (xvi. 66).²

3. The roasting jack, or worm jack, belonged to a Cranbrook family. It is, I think, unusually large, being considerably bigger than those I have seen in the Victoria and Albert Museum. It is a fine specimen of ironwork (? steel) and is presumably of the seventeenth century. Its height is 17 in., and it bears the maker's name, Tho. Weslock, London.

¹ *Proceedings*, xii. 107, and xvii. 144.

² Arms generally used *Arg.* on a chief az. 3 Catherine wheels or.

4. I also exhibit the lead matrix of a seal bearing a lion passant, and inscribed + SIGILLVM SECRETI (fig. 2). It was found on or near the downs, somewhere in the vicinity of Caesar's Camp, Folkestone, during draining operations. It bears a great likeness to the seal of William Vellechen, figured in *Archæologia*, lix, pl. III, which is of the time of Henry III (1216-72), but I doubt if it is possible to identify the owner by such a common bearing."

MR. VALLANCE emphasized the artistic interest of the clock-cases exhibited. One of his own was older than Mr. Cowper's, and was bought fifteen years ago; it had pinnacles at the corners and seemed to be perfect, though mended. Another he believed to date from the time of Elizabeth, but none exhibited was older than the first quarter of the sixteenth century. He showed photographs of others from Cluny, and two from Eynsford and Leeds Castle, both in Kent. All had buttresses at the angles, and Mr. Cowper's had battering buttresses.

MR. LYON THOMSON exhibited a moulded brick destined for the London Museum. It was made by Coade of Lambeth, who started business about 1760; and it was said to have been placed over the doorway of St. Olave's School. The date given on the tile was 1571, and the point was to decide whether Coade copied a mediæval design or actually moulded the present specimen from work of that period. Colonel Croft Lyons informed him that it was moulded from a boundary plate of cast iron. Other examples of Coade's work were to be seen in the Mall at Hammersmith: he was the precursor of the stoneware firms that flourished in Lambeth.

The PRESIDENT pointed out that the type of clock exhibited was the ancestor of the lantern clock, and had no particular relation to the clock-movement on exhibition or to the fourteenth-century turret clock of which photographs were shown. In small clocks and watches of that period the whole of the movement was of steel and iron. The pinnacles on the smallest specimen added charm to the design, but when these became small points or knobs, the artistic quality of the case was impaired.

Thanks were ordered to be returned for these communications and exhibitions.

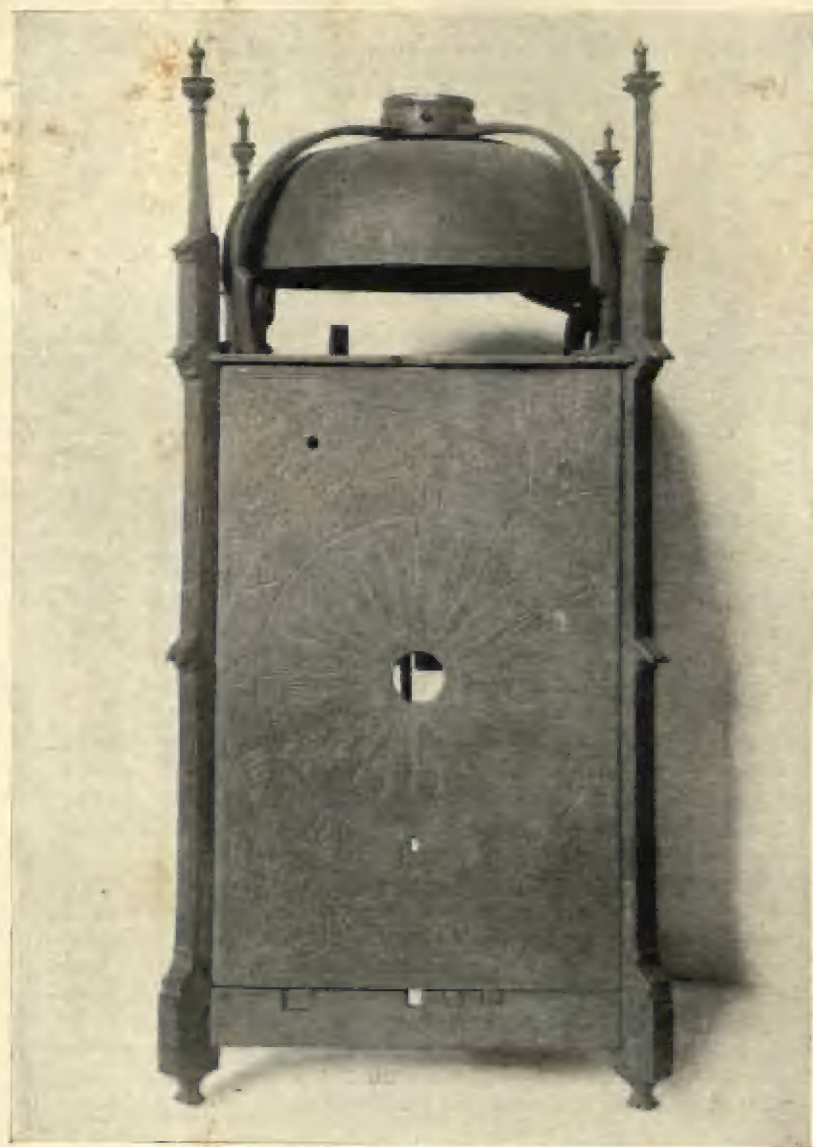


Fig. 3. CLOCK IN POSSESSION OF MR. AYMER VALLANCE.

THURSDAY, 25th MAY, 1911.

CHARLES HERCULES READ, Esq., LL.D., President,
in the Chair.

The following gifts were announced, and thanks for the same ordered to be returned to the donors:

From Professor J. R. Rahn, Hon. F.S.A.:—*Skizzen und Studien von J. R. Rahn.* 4to. Zürich, 1911.

From the Author, W. H. Duignan, Esq., F.S.A.:

1. *A forgotten Worcestershire monastery (near Wolverley).* 8vo. Walsall, 1910.

2. *Anglo-Saxon charters relating to Shropshire.* By W. H. Stevenson and W. H. Duignan, F.S.A. 8vo. n.p. n.d.

From the Author:—*Account of a Saxon cup with glass insertion, in Lincoln Museum.* By Arthur Smith, F.L.S. 8vo. n.p. 1911.

Notice was again given of the ballot for the election of Fellows on Thursday, 1st June, and the list of the candidates to be put to the ballot was read.

JOHN BILSON, Esq., F.S.A., read a paper on the Plan of the first Cathedral Church at Lincoln, illustrated by a plan of Bishop Remi's church, worked out from the remains discovered in the recent excavations undertaken by Mr. Bilson.

Mr. LETHABY had had the pleasure of accompanying Mr. Bilson on his former visit to Lincoln, and thought his work there was not only a monument in itself but also threw light on the sequence of other churches. The plan of Canterbury, for instance, was hypothetical so far as the east end was concerned, but was confirmed by the present instance. The same could be said of St. Étienne's church at Caen. The only suggestion he had to make was that the western work was the survival of an old vestibule, of which there were examples in the early church of Winchester and also at Westminster, where the vestibule was well defined. Many churches in Normandy showed considerable alterations in the western bay as if the vestibule were a constant feature. Subsequently it became more prominent, and at Peterborough it took the form of a great porch.

Mr. PEERS thought Mr. Bilson had left very little to be added to the paper by way of discussion, but referred to the question of a vault over the whole extent of the transept at the triforium

level, from the north wall to the crossing. Mr. Bilson had expected something of the sort, but found insufficient evidence to prove the point. There was one church in England—Christchurch, Hants—which showed traces in its upper works of such an arrangement. It was begun about 1090, and the transept had clearly been vaulted on the ground story, the space between the north wall and the crossing having been divided into two equal spans for the purpose. There was a respond left in the centre of the western wall, and a pair of capitals on the south-west pier of the transept that were not connected with the tower arch, and had evidently supported the groins. He approved the idea of a vestibule at the west end of Lincoln, but Ely belonged to another tradition, and followed the lines of a former church on the site, which also had its western tower in the middle between transepts. That was clear from the record of the burial of a Saxon prince 'at the west end, in the south porticus abreast of the tower'. Ely preserved an indigenous tradition and did not follow the Norman rule.

Mr. Bilson replied that less evidence as to the transept vault existed at Jumièges and Bayeux than Mr. Peers had found at Christchurch. Treatment of the entrance as an internal narthex continued, and resulted in a fine internal porch. The traces of work in the south-west angle could not be explained by a cloister, as Lincoln was not conventual, but a church of secular canons.

The PRESIDENT commended the plan adopted by Mr. Bilson of keeping ascertained facts altogether apart from conclusions and conjectures; such a distinction was more than ever desirable in the case of a long communication to the Society. The admirable ground-plan prepared in illustration of the paper was a great achievement, due not only to Mr. Bilson's knowledge and enthusiasm, but also to the enlightened policy of the Dean and Chapter, who had given him and Mr. Hope every facility and encouragement.

Thanks were ordered to be returned to Mr. Bilson for his paper, which will be printed in *Archaeologia*.

THURSDAY, 1st JUNE, 1911.

CHARLES HERCULES READ, Esq., LL.D., President,
in the Chair.

The following gifts were announced, and thanks for the same ordered to be returned to the donors:

From the Author:—Marriage, totemism and religion, an answer to critics. By Lord Avebury. 8vo. London, 1911.

From the Authors:—On some early domestic decorative wall-paintings recently found in Essex. By Miller Christy and Guy Maynard. 8vo. n.p. 1911.

This being a meeting appointed for the election of Fellows no papers were read.

The PRESIDENT exhibited a number of articles of church plate from Spain, which had been presented to him for the British Museum by a generous friend, whom he did not name until the result of the ballot had been declared—he then announced the name as that of Mr. John Pierpont Morgan.

The articles are here described in detail:

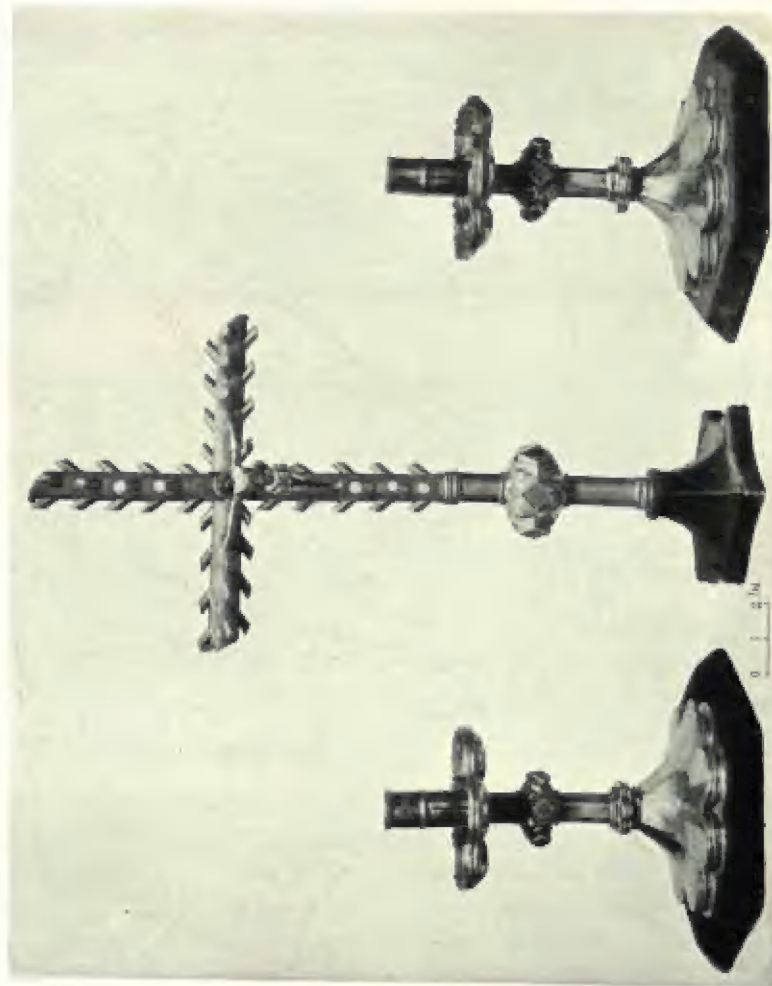
1. Ciborium (*custodia*) of silver gilt, engraved and ornamented with plaques of niello and enamel. The general design is hexagonal, the body being rounded and surmounted by a movable crescent for the wafer; around the middle a band of pierced quatrefoils with cresting, a similar cresting at the top. On the cover five figures of saints and St. Andrew's cross on a tilting shield. The saints are 'sante petre', St. John the Baptist with lamb and inscribed scroll, 'sante bartolome', St. Andrew, and 'sante paule'. On the under part of the body three plain bands, and three engraved, two of them with foliage, the third with a griffin eating a naked figure. Moulded knop with projecting lozenges set with niello plaques, alternately a St. Andrew's cross and a shield of arms, chequy or and vair.

The foot, like the body, has three engraved panels of foliage, with, on one a sleeping child, on a second a fox (?) wearing a hooded cloak; on the intervening panels are applied lozenges, enamelled, one with a shield or, bearing the St. Andrew's cross argent, the background green; the other two have the arms given above, chequy or and vair (the vair *brown* enamel on plain silver). Total H. 15½ in.

2. Pair of silver candlesticks, parcel gilt; each has a circular nozzle, hexagonal lobed pan and stem, and eightfoil foot. The pan has an embattled edge; the knop, rudely moulded, is set



1. CIBORIUM (*custodia*) OF SILVER GILT



2

4

6

2. SILVER CANDLESTICKS, SILVER GILT 4. CROSS, SILVER GILT 6. CHURCH, SILVER GILT



4. CHALICE, SILVER GILT

3. PATEN, SILVER GILT



5. STANDING CRUCIFIX, SILVER GILT



with six niello lozenges, identical with those of the ciborium; a sexfoil moulded member above the foot and the edge of foot, both chased with stars in relief. H. $8\frac{3}{4}$ in.

3. Paten, silver gilt, the centre slightly sunk and set with a medallion of Our Lord in majesty in translucent enamel, blue, green, and purple. Round the edge, in black letter, part of the Lord's Prayer, 'pater nos qui es yn celis sanctificetur noumen tuu aueniat r.' Diam. $6\frac{1}{2}$ in.

4. Chalice, silver gilt, embossed and ornamented with enamel. The bowl rests on raised leaves; hexagonal stem with lancet openings enamelled blue and green; angular knop, with engraving and tracery. Hexagonal foliate base, embossed with *ih̄s*, *xps*, and a Latin cross on a stepped pedestal; the other pabels have enamelled shields containing (1) the coat of arms of Velasco, as on the custodia, (2) the Crucifixion with the Virgin and St. John and a standing figure of St. Andrew pointing to his cross. H. $9\frac{1}{4}$ in.

5. Standing crucifix, silver gilt, ornamented with enamelled panels, and similar on both faces. The body of the cross is formed of a series of circles of gadrooned Gothic tracery, edged with trefoil cresting. The figure of Our Lord is only parcel gilt, and has behind the head a gold plate, enamelled. The ends of the arms are trefoil shaped, and all four set with enamelled panels, on both faces. The trefoils in front are, the Virgin, St. John (with scroll, *san̄te iōanes*), and above and below the arms of Velasco (as on the ciborium) with the cross of St. Andrew; at the back the symbols of the Evangelists, admirably engraved and enamelled. All the enamels are translucent, and generally with blue backgrounds.

In the centre, on the back of the cross, is a disc of crystal covering a gold cross with relics of the True Cross, and on the arms of this small cross is engraved *ecce cruce[m] dñi*.

The stem of the cross is hexagonal with figures of Apostles, SS. Peter, Paul, Andrew, &c., divided by buttresses; below, figures of the Virgin (twice) and saints under arches. The base is a long hexagon, plain but for two applied lozenges, one containing the Velasco arms on a blue ground, the other a shield with St. Andrew's cross on a green ground. H. 17 in.

6. Crucifix of silver gilt. The cross itself is raguly, that is, resembling a tree trunk with the branches cut off short, and the arms are cut off at an angle. The figure of Our Lord is only parcel gilt. The cross fits into a stem with a large knop with mouldings and six diamond-shaped projections, each set with a nielloed plate, rudely ornamented with the arms of Velasco, as on the foregoing specimens. H. $17\frac{1}{2}$ in.

The PRESIDENT has since supplied the following note :

"I have been fortunate enough to secure a good many details of the probable story of these objects from my friend Señor Guillermo J. de Osma, hon. F.S.A.

They come from the Hospital de la Vera Cruz at Medina de Pomar near Burgos, and not, as I originally thought, from the Convent of Santa Clara in the same place, from which came the royal gold cup now in the Museum. The Hospital was founded by Don Pedro Fernandez de Velasco (born in 1399), Señor de Medina de Pomar, Conde de Haro (d. 1469-70). His grandson became the first Duque de Frias. This Don Pedro was an important man in his time, and among other activities founded twelve monasteries, among them that before named of Santa Clara. The rest of the story I will give in Señor de Osma's own words, as I doubt my power of improving them :

'His other foundation in the same town was more peculiar for its time. The Hospital de la Vera Cruz was originally a home for twelve decayed (in the sense of impoverished) hidalgos. They lived together under a kind of amateur monastic dispensation of the founder, who was a man, not merely of virtues but of fads and hobbies. On the 14th August, 1455, he added a library to the establishment "para recreo é instruccion" of its members, providing them with very nice picture books, of which more anon. When not improving their minds, they fed any hungry traveller; and seven beds, and medical attendance, were in readiness for all comers, in their need.

'I can't find the exact date of the foundation. It was before 1455, obviously. About 1459, our Count had become sick of court life, and lived with the inmates of his "Hospital", issuing forth as political occasions demanded, and then appearing, for choice, riding a small donkey and with a large rosary always in hand. In ordinary, he, with his twelve old boys, heard mass daily, and they all dressed alike, in cloaks of kersey with hoods of the same, bearing on the breast (here we get to work) the white *aspa*¹ of St. Andrew, for whom the founder had an especial devotion. On one historic occasion, when he went out to stand umpire between Enrique and Alfonso, he is expressly described as wearing across his breast "el *aspa* blanca de S. André".

'I underline, because the "aspas" on your altar-pieces are silver, which answers to the white "aspa" of the Hospital community or club.'

Thus far Señor de Osma, whose contribution adds greatly to the interest of the exhibition. There can be little doubt from the style of the earlier pieces of this service, that these at least were

¹ *Aspa*, as distinct from *cruz*, is St. Andrew's cross.

made for the Hospital at the order of the founder, Don Pedro, before 1459, when he went to live with the members of his Hospital, and probably about 1455, when he gave his books to the foundation. The pieces that I would put earliest are the custodia, the paten, and the candlesticks, possibly also the crucifix, no. 5. But the cross raguly and the chalice seem later. These two may conceivably have been given by one of Don Pedro's daughters, who became a nun at Santa Clara; her arms would be the same as her father's. These arms, which occur on every piece but the paten, are certainly those of the founder of the Hospital, Don Pedro, the grandfather of the first Duque de Frias; the present arms of the family, the same with a bordure of lions and castles, were probably augmented in this way to signalize the high office of Chancellor which became hereditary in the male line of Fernandez de Velasco, Dukes of Frias, from 1492.

It is perhaps singular that none of the pieces bears the stamp of a silversmith, an indication of the origin that is very commonly found on Spanish plate of the time."

The PRESIDENT also exhibited an alabaster table of the Nativity, in unusually good preservation, to be acquired for the British Museum. It will be figured in the Catalogue of the Alabaster Exhibition.

Thanks were ordered to be returned for these exhibitions.

The ballot opened at 8.45 p.m., and closed at 9.30 p.m., when the following were declared elected Fellows of the Society:

As Ordinary Fellows:

John Herbert Marshall, Esq., C.I.E., M.A., proposed by the Council *honoris causâ*.

Alexander Ormiston Curle, Esq.

Rev. James Davenport, M.A.

Rev. Henry Paine Stokes, M.A., LL.D.

George Eley Halliday, Esq., F.R.I.B.A.

Harry Reginald Holland Hall, Esq., M.A.

Stewart Henbest Capper, Esq.

Frederic Cornish Frost, Esq.

As an Honorary Fellow:

John Pierpont Morgan, Esq.

THURSDAY, 15th JUNE, 1911.

CHARLES HERCULES READ, Esq., LL.D., President,
in the Chair.

Professor HAVERFIELD, Vice-President, read the following paper on the Corbridge excavations of 1910 :

"Excavation began at Corbridge in 1906, by way of experiment; it was recommenced on a larger scale in 1907; in 1910 it achieved the fourth year of full work. How many further seasons may be needed to exhaust the site we cannot yet foretell: at present we have hardly completed more than half, if indeed we have really completed half, of the area which calls for exploration. But the importance of the work is already well recognized both in England and abroad, and we may hope that nothing will hinder its due progress to its proper end.

It is interesting, I believe, not only in its results, but also in its methods, and before I proceed to my special subject this evening, the results of the 1910 campaign, I should like to emphasize one or two aspects of the methods and circumstances of the undertaking. In the first place, we enjoy at Corbridge the help of a wise and liberal landlord, Captain Cuthbert, D.S.O., of Beaufront. The ill fortune which prematurely closed the unfinished excavation of Silchester, and which has, to my knowledge, prevented the commencement of work at three other important Roman sites during the last six or eight months—the opposition of landlord or landlord's agent—has been spared to us. Instead, we have to confess that we owe to Captain Cuthbert a real part of our success.

Another element of good fortune is, I think, the combination of Northumbrian and other workers. Besides our Fellows, Mr. R. H. Forster, who has been in continuous charge of the diggings since 1908, and Mr. W. H. Knowles, who has aided us over architectural difficulties and has measured and drawn all our plans, we have been able to use helpers who come mostly, though not entirely, from Oxford and who spend several weeks of the Long Vacation on the spot, assisting in the supervision of labourers, taking charge of visitors, and examining and cataloguing the almost overwhelming mass of smaller finds which our trenches yield. Three or four Fellows of Colleges and five or six younger men have thus enabled us to record and to inventory our numerous discoveries with some approach to completeness, and to issue our annual Reports—always a difficulty to excavators—with some sort of fullness as well as punctuality. A further advantage of this method of work is that we can include in our staff a few

beginners in archaeology, and put them in the way of learning how to conduct excavations, how to handle workmen, and how to deal with and to record finds. This practical training of future archaeologists is a new effort, never yet attempted in any English excavations, and we hope that, as we succeed in developing it and learning how to do it better, we may prove to have done something towards the uncovering of Wroxeter and other Roman sites awaiting the spade. I know already of one young schoolmaster who learnt his archaeology at Corbridge and is now beginning good work in his own neighbourhood in the investigation and recording of Roman antiquities.

A third and less pleasing feature is the cost of the work. The site at Corbridge was occupied from the Flavian period, about A.D. 80, till near the end of the fourth century. During those three hundred years it was repeatedly built over, destroyed, rebuilt. The lowest Roman remains in it are buried beneath a deeper layer of soil and a heavier mass of debris than those of almost any Roman site which I have seen in this country, and the cost of exploring the lower levels is proportionately heavy. Another embarrassment is the wealth of smaller finds which the site has yielded. This has involved us both in the erection of a temporary museum and in no small outlay on the provision of adequate illustrations for the Reports printed in *Archæologia Aeliana*. These seem to be fair reasons for asking antiquaries to contribute to our funds with generous hands.

After this preface I come to the discoveries of 1910. In these the chief item is the further examination of the large building, called colloquially (if not very happily) the 'forum', on Site XI (fig. 1). This stands on the north side of the main street. A drinking-fountain and two large granaries (edge of plan, HORREVM) adjoin it on the west, and belong, in part at least, to the same period as it. No other buildings of similar date have been traced near it, unless perhaps on the south side of the street, where we have hardly dug; but a small isolated granary of possibly the same age was found in 1908 lying a little way to the north.

As now almost completely excavated, Site XI proves to be a square of about an acre in extent, and to include a central open yard, 170 ft. each way, which is enclosed on every side by a continuous range of buildings about 25 ft. wide. In the yard are other buildings (plan, a, c), but these appear to be of different date, partly perhaps earlier and in part perhaps later than the main structure. Of this main structure the southern half, that is, the south range and the southern parts of the east and west ranges, is fairly well preserved; of the rest we have so far been

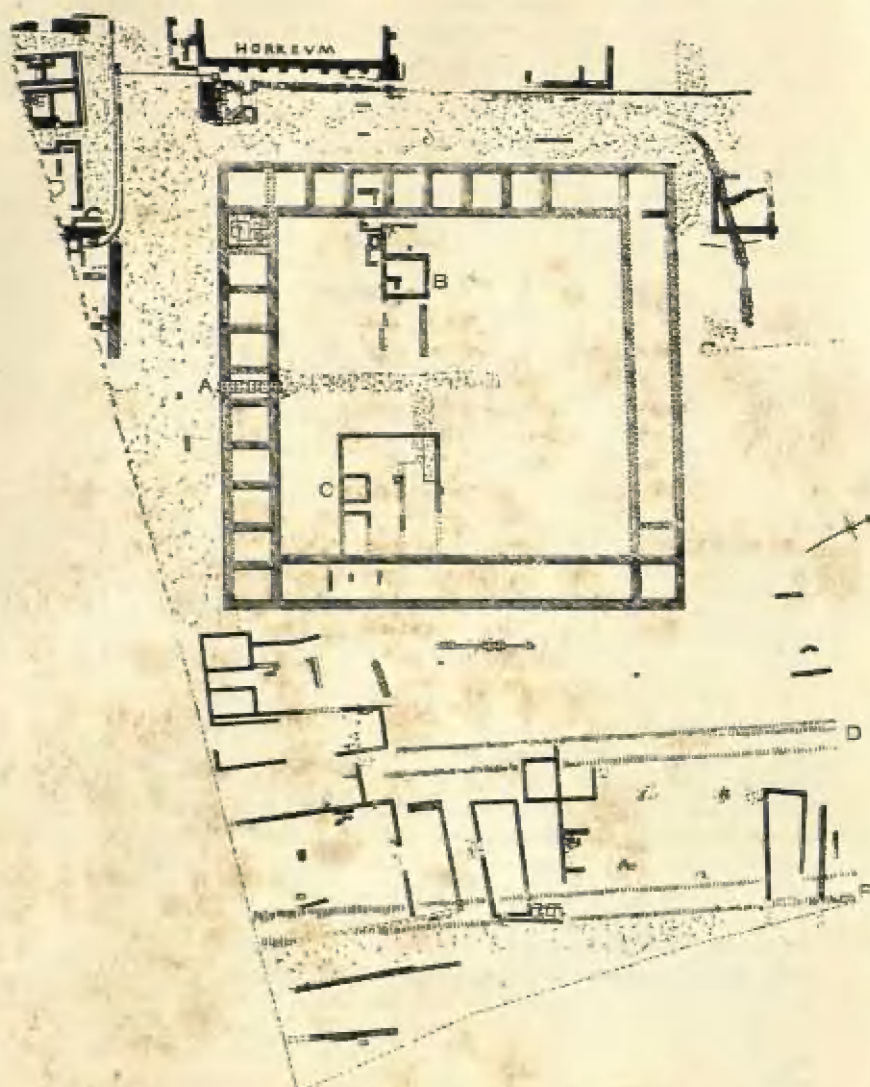


Fig. 1. CORBRIDGE EXCAVATIONS, 1910, REDUCED FROM PLAN BY MR. W. H. KNOWLES. (SCALE ABOUT 1:1100.)

A, Entrance; B, C, Buildings of a different date in the open courtyard;
D, Refuse ditch (p. 486); E, East ditch (p. 485).

able to find little beyond the foundations of the outer walls. The better preserved parts, however, show well the massive bossed or 'rustic-faced' masonry and the stately moulded plinth which mark the building as the strongest and stoutest Roman work yet found in northern Britain. The west and south ranges were divided up into smallish rooms measuring internally about 15 or 16 by 16 or 18 ft. In the middle of the south range was a commodious entrance, with a strong square sewerway of stone beneath it, such as occurs elsewhere in Roman building at points liable to heavy pressure (plan, A). The east range was nearly all one room, unless it had wooden partitions. The north range showed one or two indications of cross-walls, but they cannot yet be called certain. Most of the rooms opened into the central court by wide apertures—11 or 12 ft. across; some of those on the south side certainly did not so open, but whether they gave on to the outer street or were entered from one another is not yet clear.

The most striking feature of the whole, apart from its size, is the bossed masonry. This is, of course, a very common method of Roman building in the lower courses of a structure: it is remarkable here because it is employed, not only on the outer walls, but also on the inside and on the partition-walls of the single rooms. I do not wish to enter into controversy as to these bosses, but I may say that (as at present advised) I altogether disbelieve a suggestion which has been advanced, that these bosses were worked at the quarry with the intention that they should be wholly smoothed off after they had been placed in the wall. It would be (as architects agree) so hard to smooth the bosses when the stones were in the wall, especially at the corners, and it was so habitual with the Romans to use bossed masonry, that it is really difficult to suppose that the walls were meant to be other than what we now see. It is to be noted, too, that, where the cross-walls run up to the main walls, so much of the bosses has actually been smoothed as was needful to let the walls fit together, and this step seems inconsistent with an intention of smoothing all the bosses wholly away. For it would be idle to smooth half a boss for a wall-joint and to leave the rest of the boss standing, if the intention subsisted of removing the bosses altogether. I conclude, then, that the 'rustic' masonry was intended to be permanent. But I should add that it was probably not intended to stand very high. Bosses, as I have said, belonged to the lower courses of Roman structures, and the 'bossed courses' at Corbridge, when perfect, did not probably rise to any great height. How the building was continued upwards, whether in smaller stone or timber or otherwise, and what roofage was employed, is quite uncertain.

One other question is difficult to settle. Was the building ever

finished? It certainly was occupied, at least in its southern half, for some two hundred or even two hundred and fifty years, and, in one sense or other, this southern half must have been finished. Moreover, there are signs that one piece in the middle of the east range may have been purposely demolished, perhaps by indignant Britons in a revolt, and it seems unlikely that any one would take the trouble to overthrow a wall which had not been carried more than only one or two courses high. On the other hand, details in the middle of the east and west ranges resemble unfinished work, and the question remains to be settled, as I hope, this summer.

Lastly, a word as to the date of the structure. Here coins and pottery suggest (i) an occupation beginning in or slightly before the middle of the second century and ending in a destruction near the end of the same century, (ii) a reoccupation after this, which ended about the middle of the fourth century and which probably did not cover the whole building, and lastly (iii) some sort of reoccupation in the later part of the fourth century. This third stage must, however, have been both brief and limited to a small part of the buildings. The rest became a quarry for builders. Some of the large bossed stones were taken to serve as gutterstones in the latest Roman roadways.

The question now arises, what was this building? If we review the Roman structural remains known to us—apart from private houses of which there is clearly no question here—we find two classes of buildings which might seem similar in respect of size, of rectangular shape, and of ample interior court. These two are the forum (or town hall and market-place) of the town and the principia (or head-quarters) of the legionary fortress. It may be well to ask whether our building can be either of these.

(1) City fora are known to us from examples uncovered at Pompeii, Veleia, Augusta Bagiennorum in Italy; at Tingad in Africa; at Doclea in Dalmatia; at Kempten in Bavarian Swabia; at Caerwent, Silchester, and Verulam in Britain, as well as from partial finds elsewhere. All of them regularly show features of importance which are absent at Corbridge. Our building has no basilica (town hall), nor even room for one. It has no cloister or colonnade round its open court. It has on the east side no apartments suitable for shops, while on the south and west the apartments, though of suitable size, are unfitted for such use by reason of the interior bosses. Its massive masonry is both much too massive for commercial needs and much too costly for anything but governmental work. Moreover, a forum implies a highly developed town-life, such as the remains of Corstopitum do not indicate. Lastly, the buildings nearest that now under discussion, the two granaries (*horrea*), are such as occur only on

Roman military sites and never in Roman towns. The natural inference is that our structure was not meant for a forum.

(2) Principia of legionary fortresses are less well known to us than municipal fora. But examples have been unearthed at Lambaesis in Africa, Carnuntum in Pannonia, and (though less useful for our purpose) at Neuss on the frontier of the Lower Rhine, while the principia of smaller forts are familiar enough, and obviously give us some guidance. On the whole, the principia resemble our structure more closely than do the fora; they also suit with the adjacent granaries. But an invariable feature in them (as in the fora) is a colonnade or cloister round the interior court, and an almost invariable feature (save perhaps in the earliest cases) is a division of this court into two parts. Both these features are absent from our building, and it is therefore not very easy to consider it even an unfinished example of a legionary head-quarters.

There is, however, another type of military structure, much less common than either forum or principia, which agrees with ours in size and shape and plan and character. The two buildings shown in fig. 2¹ stand side by side and next to the 'quaestorium' in the legionary fortress of Carnuntum, which guarded the Roman frontier on the Danube a little below Vienna. Each of them covers about an acre; their construction is solid, and between them they show just that mixture of large and small rooms which marks our Corbridge structure. They served, as it seems, for stores, and there is evidence that carts or trucks were taken into the court of the building c (gate at 1), presumably in connexion with these stores. I incline to suggest that our great building was also a storehouse. The neighbourhood of the two *horrea* fits this view, while the existence of interior bossed masonry is not hostile to it, as it is to the idea of shops. What precise stores were bestowed here, whether live stock or some form of dry goods or weapons or other necessities, I do not presume to guess, nor do our smaller finds give any clue; obviously the building could accommodate stores of very various kinds.

If we accept this view, two possibilities lie open to us. Either the Romans meant to erect here a legionary fortress but built only the storehouses. Or, they erected here a store-base for the armies which in and after A.D. 140, for sixty or seventy years, were engaged in operations in Caledonia.² The second theory

¹ *Römischer Limes in Oesterreich*, x. 35-43, Tafel ii. Somewhat similar buildings seem to have been noted at Neuss.

² It may also be suggested, as Dr. Drexel has lately suggested about Faimingen, a Roman fortified site on the Upper Danube, that Corbridge was a dépôt not so much for armies invading Caledonia as for the forts and garrisons on the adjacent parts of Hadrian's Wall. In that case one would expect to find a road leading directly from Corbridge to the nearest fort

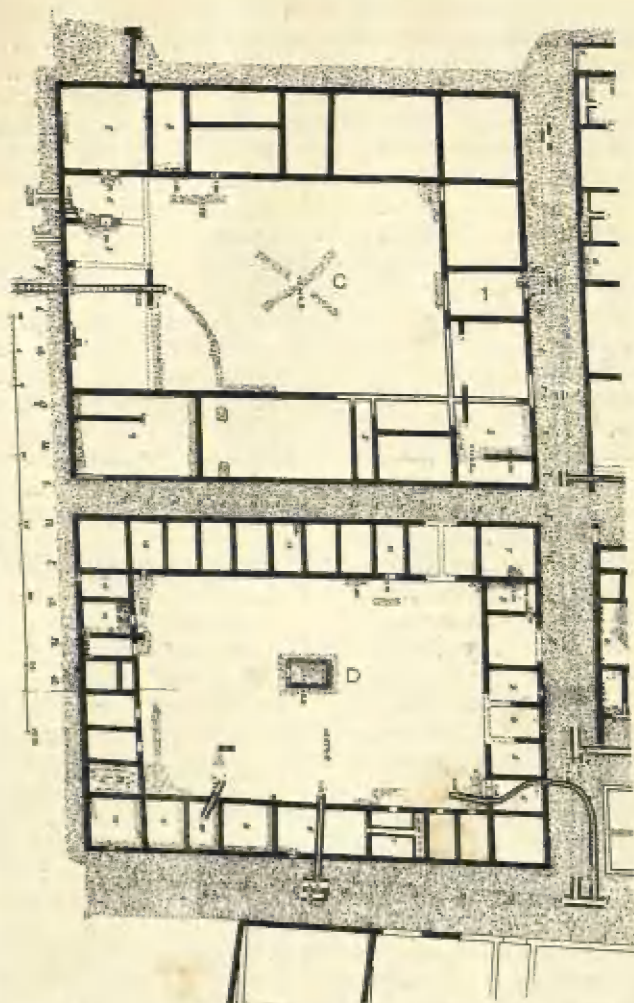


Fig. 2. STOREHOUSES AT CARNUNTUM. (SCALE ABOUT 1:1100.)

seems the better. It agrees with the dates which we have assigned to the building. It agrees also with the fact that, so far

at Hunnum, and no such road has been yet made out. But the place may have been primarily intended as a base for field-armies, and yet have been also, or afterwards, utilized for the provisioning of the Wall. It must be added, however, that the forts on the Wall had each its own storehouses, and that we have no trace of any system by which Roman forts of this character were provisioned from special centres.

as we can tell at present, the *horrea*, the fountain, and the large building stood at first more or less alone.¹ They did not adjoin (except perhaps on the south) other buildings of any size erected along with them: the walls which we have met to the east and north and west appear nearly all to be of later date and different workmanship. The theory of the store-base has, therefore, the merit of supposing just such a group of buildings as we actually have before us. Should it be accepted, peculiar interest will attach to the structures which we are now considering. No such 'base' has ever been excavated elsewhere in the Roman Empire; we know them only by such names as *horrea Margi* on the Danube frontier.

But the large building is not the only one excavated in 1910. We found to the east of it, as we found to the north in 1909, a number of smaller, ill-built and ill-arranged structures, nearly all of which are of later date, as both levels and coin-finds show. It is not possible to offer any certain explanation of most of these buildings, which are, indeed, very poorly preserved. But we may imagine that when the era of Caledonian offensive warfare ended for ever, soon after A.D. 200, the importance of the store-base at once declined. The storehouses themselves were perhaps converted to other purposes than stores, and dwellings of a cheap and inferior class sprang up, to form a large ill-constructed village or *vicus*, whose inhabitants were doubtless not unconnected with the garrisons of the Wall. Yet even this contained official elements. The bas-relief of the Sun-god, found in 1908, seems to belong to the fourth century, and it indicates a building (whether a temple or a secular structure) which must have been ambitious and official.

A further find of 1910 consists in two broad parallel ditches, running north and south through the eastern part of the area under exploration. (i) The eastern of these ditches (plan, *e*) contained pottery of the late first and the early second century, and it may quite possibly be the western ditch of a fort built at that time. We have reason, from former finds made at Corbridge and elsewhere, to believe that Agricola laid out the Roman road, Dere Street, which ran through Durham and Northumberland to Newstead and beyond. If so, Agricola founded Corbridge, that is, he doubtless erected there a fort of the 'auxiliary' type to guard the bridge across the Tyne. We must wait till we can dig eastwards to test this view. But the pottery found in 1910 suits well with the idea that the ditch which we have found was gradually

¹ The pottery-store, found in 1907, which probably belongs to the second century, may be a smaller store-building belonging to the general group of storehouses.

filling up with silt and broken crockery during the years which elapsed between Agricola and Hadrian. (ii) The other, western, ditch (plan, d) runs parallel to that just described, but is rather too far from it to belong to the same set of defences. It was found to be full of sewage matter, with a few wooden tent-pegs and some leather intermixed; on the top of (but not in) this deposit lay a thin stratum of broken potsherds, including Samian of the type Drag. 29, which may date from Agricola. Possibly we have here the sanitation of some army of Agricola operating in the Tyne valley or towards Cheviot. Possibly the pit was filled when the Wall was a-building under Hadrian, and some earlier rubbish was swept in on top.

Besides the buildings and ditches, we have also at Corbridge an astonishing wealth of minor finds—coins, pottery, brooches, and what not. Of coins we have already found and recorded more than have been recorded from the whole of the Roman Wall,¹ and Mr. H. H. E. Craster's careful lists are among the most valuable parts of our Reports in *Archaeologia Aeliana*. Of pottery we have no less copious and varied a store. The find of scale armour, of which I exhibit a specimen here (fig. 3), is, if not the largest ever made, certainly the largest yet detected in this island. The variety and interest of the brooches are equally real (fig. 4), and other bronze, iron, lead, and similar items are numerous and noteworthy. Of sculptures we have, it is true, got nothing in 1910 to equal the Lion of 1907 or the Sun-god or the 'Bellerophon' (really perhaps an apotheosis of a Roman emperor) of 1908. But an altar set up *Iovi aeterno Dolicheno et caelesti Brigantiae et Saluti* by one C. Iulius Apolinaris (*sic*), centurion of the Sixth Legion, is both admirably preserved and interestingly dedicated (see plate). Useful additions to groups of well-known objects have occurred in the form of two leaden seals similar to those found at Shields, Brough-under-Stainmore, and elsewhere, and a bronze roundel similar to those found at Silchester in 1891, at High Rochester, and abroad. I may also note ten leaden *glandes* weighing from 3 to 5 oz. each and resembling those found some years ago at Birrenswark.

I may perhaps conclude by mentioning two general problems in respect of which our smaller finds seem likely to turn out very important. The first concerns the chronology of Samian ware. Much as has lately been achieved, especially in Germany and France, to determine this chronology, there are still many uncertainties around it. One of these uncertainties is involved in the question whether we have not been dating some of the decorated varieties twenty or thirty years too early. I have stated, both in a

¹ I except, of course, the Coventina hoard.



ALTAR, FOUND IN THE METALLING OF A LATE ROADWAY, IN FRONT OF THE
ENTRANCE TO THE LARGE BUILDING (PLAN, A).

paper read to this Society and elsewhere,¹ that the class of decorated Samian known as Drag. 29 did not pass out of use, at least in Britain, as early as the usually assigned date, A.D. 70, but lasted on till after A.D. 85, and German friends tell me that they are now prepared to say much the same of the German finds and to put the disappearance of Drag. 29 there as late as A.D. 100. Probably we shall have to make a similar retardation in the chronology

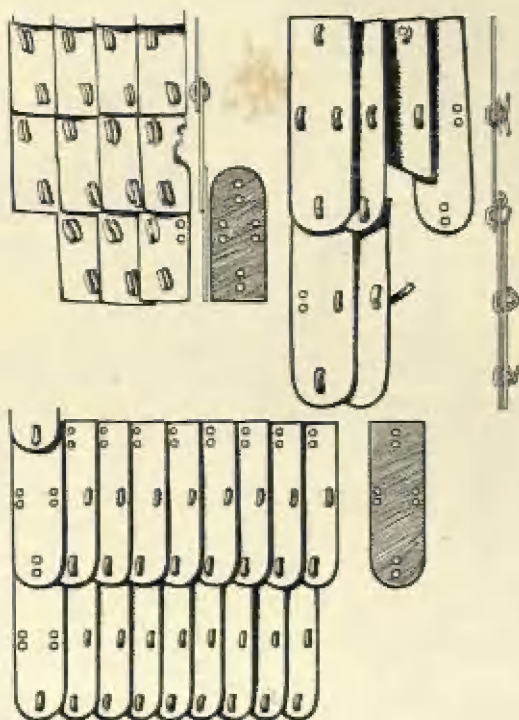


Fig. 3. SCALE ARMOUR (THREE VARIETIES). (4)

of the earlier types of Drag. 37, and for the discussion of such a problem the Corbridge finds, which begin in 80 and go on continuously, should be very useful, especially when compared with certain Newstead finds of Mr. Curle which begin at the same time but end about A.D. 115-120. Whatever the result of our inquiry, it will be important. Quite a number of historical problems, and even fundamental problems of the Wall, will be

¹ *Proceedings*, xxiii (1910), p. 118; *Transactions of the Cymrodorion Soc.*, 1908-9, p. 179 = *Milit. Aspects of Roman Wales*, p. 127.

solved or brought far nearer their solutions by proper dating of these potsherds of the 'early 37' class.

Another question on which Corbridge may throw light is the relation between Roman and barbarian art in the later Empire. The Roman site here has yielded early Saxon remains, fibulae and beads—the fibulae are figured in our Report for 1908, fig. 25—and a small broken urn of dully-polished black ware of which I append an illustration drawn by Mr. F. Anderson (fig. 5). These



Fig. 4. FIBULAE FROM CORBRIDGE ($\frac{1}{2}$).¹

are all post-Roman in date; they belong to English Corbridge. But Corstopitum has also yielded two or three objects which seem to show Teutonic or Scandinavian influence while belonging, in date at least, to the Roman age of Corstopitum. The lowest of the group of fibulae shown in fig. 4 is a silver piece decorated with tiny knobs and somewhat curiously formed with a disc at the head and a disc on the bow. A somewhat similar fibula in gold, similarly knobbed, was found in Hungary and is now preserved in the British Museum; it is attributed

¹ The last fibula in the second row was found in or above the Refuse Ditch (plan, n), but not (as is stated incidentally in the recent vol. of the Cumberland & Westm. Arch. Soc. *Proceedings* xi. 442) in association with pre-Hadrianic coins and pottery.

(I do not know quite on what grounds) to the end of the third century.¹ A similarly ornamented but differently shaped fibula was found near Breslau in Eastern Germany with a gold coin of about A. D. 270,² and others have occurred in Scandinavia. The actual form of our fibula, less its knobs, has occurred both in Roman sites on and near the German frontier,³ and in the lands east of that frontier to the Elbe. In all these cases we seem to note a combination of Roman and barbarian, due doubtless to the barbarian immigrations, but earlier than the fall of the Em-

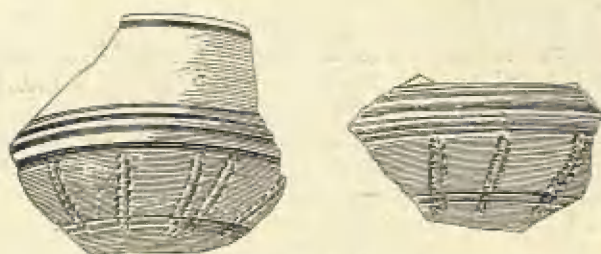


Fig. 5. FRAGMENTS OF ANGLO-SAXON URN ($\frac{1}{2}$).



Fig. 6. WOODEN KNIFE-HANDLE ($\frac{1}{2}$).

pire in the West. So, too, a wooden knife-handle (fig. 6) shows details which some might call Roman and others Teutonic. We are on the verge of the barbarian world."

Mr. R. H. FORSTER was not satisfied as to the character of the so-called forum. The Caerwent parallel had not been accepted in the paper, but the Corbridge building seemed to him similar to the Caerwent forum, though the latter was incomplete, the missing portions being those that would have been constructed last. There was no mechanical difficulty in dressing the stones after they were built into the wall. In modern buildings of the

¹ Marshall, *Catalogue of Jewellery in the British Museum* (1911), no. 2853, plate lxi. I owe the reference to Dr. C. H. Read, our President; Mr. Marshall has since shown me the object.

² Almgren, *Nordeuropäische Fibelformen*, fig. 184; Lindenschmit, *Alterthümer*, iv, plate 65.

³ Osterburken, Zugmantel, etc. These examples from forts on the German Limes are of course anterior to about A. D. 250.

kind the stones were not dressed in position, but squared with a chisel and the centres dressed off with a pick. The space between the two walls in the Corbridge 'forum' had been dug out to a depth of about 3 ft.; then the clay-and-cobble foundation had been cut away to about half the thickness, and there were marks of crowbars on the stones. The destruction of the wall was therefore not due to subsidence, but was intentional. There was nothing to prove that the wall was ever higher than when discovered: no stones had been found in position above the plinth course.

Professor HAVERFIELD replied that if the wall had never been higher than at present, there would have been no occasion to undermine it; it must have exceeded the height of a man if people thought it worth such a deliberate and laborious demolition. At Caerwent, and in all fora, there were two features not represented at Corbridge—a large basilica and a corridor; and it was therefore useless to compare the two buildings.

The PRESIDENT remarked on the wealth of illustration from foreign sources that had been brought to bear on the Corbridge excavations. The year's finds surpassed those of any previous year at Corbridge or elsewhere in Britain; and unconsidered trifles like those exhibited often threw light on the date and evolution of the different types. That was specially the case with the two pins, like scarf-pins with ring-heads, which constituted links in a chain of evolution extending from the late Bronze Age to the ninth century of our era. He saw in the series the origin of the ring-brooch, and a highly developed and complex form of the primeval safety-pin. The small brooch ornamented with raised dots might be compared with gold examples from Hungary in the British Museum, dating from the fourth century. Oriental and Scandinavian types were also represented in the Corbridge series.

REGINALD A. SMITH, Esq., F.S.A., read a paper on the ancient lake-dwellings discovered by Thomas Boynton, Esq., F.S.A., at Ulrome and elsewhere in Holderness. The best example of these settlements was known as West Furze, on the Skipsea drain, and consisted of two floors or platforms made of tree-trunks laid horizontally, packed with brushwood, and held in position by piles driven into the peat or gravel. The upper level yielded the only piece of metal found on the site—a spear-head of the late Bronze Age—and contained piles sharpened with a metal tool, whereas those below were trimmed in a primitive fashion with stone axes, apparently in the neolithic period. The complete excavation of the site was suggested by the discovery of a

number of adzes, made of the radius of the ox, in the drain which had been cut through the lake-dwelling, the narrowness of the original mere at this point giving security from attack, and at the same time access to pasture for cattle, which was also surrounded by water.

Modern drainage had changed the face of the district, but similar conditions must have prevailed at the Round Hill site, nearer Skipsen, on the same drain. A number of flint flakes were recovered from both sites, and tools of other stones were plentiful; while bones of the dog (two breeds), pig, red-deer, sheep, ox, horse, beaver, cormorant, and wild duck had been identified. Part of a reindeer antler might also date from the earlier days of occupation, and a similar find in peat at Newbury with remains of lake-dwellings was significant; but the reindeer was not extinct in Scotland till the middle ages. The pottery, on the other hand, seemed to be mainly of the early Iron Age, devoid of ornament, and made without the wheel; and while later occupation of such dwellings was unlikely, it was difficult at present to say when this system of construction was first introduced into Britain.

Professor BOYD DAWKINS remarked that there had been various discoveries of the reindeer in the peat and alluvia of this country: it was hunted in Scotland as late as the thirteenth century, and was not therefore a proof of very early date at Ulrome. The antiquities exhibited were obviously mixed, the remains of occupation apparently from neolithic times to the middle ages. Though no definitely neolithic objects had been found in the lowest bed at West Furze, it was probable that the floor below that on which the bronze spear-head was found belonged to the late Stone Age. To distinguish neolithic and Bronze Age pottery was a difficult task that he would not undertake. Even in Roman stations there were survivals of pottery that might go back to the Bronze Age or even to the neolithic period. The skull showed the effects of bandaging to alter the shape, as was occasionally noticed. He was glad to see the series collected and exhibited, but foresaw difficulties in the classification of it.

The PRESIDENT had known the finds since the excavations took place, and expressed the obligations of the Society to the excavator for his enlightened enterprise in the days when such work received little encouragement. Without any special training, Mr. Boynton had spent a great deal of time and money in an attempt to throw light on the antiquities of his neighbourhood. Classification was a difficulty inherent in all peat deposits, small and heavy objects having a tendency to sink below other objects

of the same horizon. Thus in Scotland a stone axe-head had been found in peat some feet below its haft. There was, however, no mystery about the date of most of the pottery found: it was clearly of the early Iron Age; and neolithic ware of the type recently recognized as such was conspicuous by its absence.

Mr. Smith's paper will be printed in *Archaeologia*.

Thanks were ordered to be returned for these communications.

THURSDAY, 29th JUNE, 1911.

CHARLES HERCULES READ, Esq., LL.D., President,
in the Chair.

The following gifts were announced, and thanks for the same ordered to be returned to the donors:

From the Author:—Bristol archaeological notes, 1906-9. By John E. Pritchard, F.S.A. (With extra photographic illustrations inserted.) 8vo. Bristol, 1907-10.

From C. R. Peers, Esq., M.A., Secretary:—Report of the Inspector of Ancient Monuments for the year ending 31st March, 1911. fol. London, 1911.

From the Author:—Llandaff Church Plate. By G. E. Halliday. 8vo. London, 1901.

From the Author:—Der Sirgenstein und die diluvialen Kulturstätten Württembergs. Von R. R. Schmidt. 8vo. Stuttgart, 1910.

From Philip Norman, Esq., LL.D., Treasurer:—The records of Rochester diocese. By Rev. C. H. Fielding, M.A. 8vo. Dartford, 1910.

The following were admitted Fellows:

John Herbert Marshall, Esq., C.I.E., M.A.

George Eley Halliday, Esq., F.R.I.B.A.

Rev. Henry Paine Stokes, M.A., LL.D.

Frederic Cornish Frost, Esq.

The PRESIDENT made a statement with regard to a proposal by the Rural District Council of Scarborough to utilize the Scamridge Dykes for the purpose of constructing a reservoir to supply the village of Snainton with water. He stated that his attention had been called to the danger in which these earthworks stood by the Earthworks Committee of the Archaeological Congress, and he had at once communicated with Mr. Boynton, the Society's Local Secretary at Bridlington.

Mr. Boynton forwarded the letter to the Clerk of the Scarborough Council. This gentleman wrote to the President somewhat resentfully, stating that though the plans adopted by his council would partly destroy the Scamridge Dykes, it was proposed by the council to alter them *after* they had been passed by the Local Government Board. Mr. Read replied with a suggestion that they should be altered first, and then submitted to the Local Government Board. As he could get no satisfactory assurance on this point, he then wrote to Mr. John Burns, the President of the Board, calling his attention to the matter and asking him to assure himself that no other means of supplying the village with water could be found before assenting to the destruction of the Dykes. Mr. Burns eventually informed Mr. Read that he had ordered an inquiry into the whole matter, and that the Society could be represented at it. Through the good offices of Mr. Kitson Clark, Mr. Read was able to secure the services of Mr. Crossley, the Secretary of the Yorkshire Archaeological Society, to represent the Society of Antiquaries at the inquiry. The result of the inquiry was that a site for a reservoir has been found that will in no way endanger the integrity of Scamridge Dykes.

The President said that it was a real pleasure to bring so satisfactory a statement before the meeting, and pointed out that archaeology was indebted to Mr. Burns for his enlightened action in ordering an inquiry on the spot, and that the Society was grateful to the other gentlemen who had so usefully served it.

C. B. W. BROOK, Esq., exhibited on behalf of the Earl of Dalkeith a series of Roman antiquities found during ironstone-working at Kettering, Northants.

F. W. BULL, Esq., F.S.A., read the following paper on the Romano-British finds near Kettering:

"The fact that Kettering was the site of a Romano-British settlement has long been known. Bridges, the Northamptonshire historian, writing early in the eighteenth century, states that in Stonylands, between Weekley Woods and Kettering, have been found in digging stone several urns, coins, and bones, and goes on to refer to the vestiges of a dyke carried as far as the Duke of Montagu's park in Weekley.¹

In the minutes of this Society, too, for 14th December, 1726, reference is made to a find of coins at Kettering as follows: 'Mr. Sawyer² produced a parcel of coins which were found near

¹ Bridges, *Northants.* vol. ii, p. 241.

² No doubt Edmund Sawyer, of Lincoln's Inn, whose father was Henry Sawyer, of Kettering.

Kettering in the field: C. Caesar Germanicus, B. Agrippina, Drusilla, Julia, Trajan, M. Aurel., Faustina, Gordian, Antonia Augusta, Claudius, Constantinus, Maximianus. Middle Brass, Carausius, Allectus, &c.' The exact spot, however, where the coins were found is not recorded.

Through the kindness of the Duke of Buccleuch I was some time since supplied with copies of two old Kettering maps which give old field names and are otherwise valuable. One is dated 1728 and the other is possibly about the same date.

From these maps the land called Stonylands, referred to by Bridges, is easily identified, and clearly forms part of the estate of the Co-operative Society referred to later, while an old road running along the extreme south-western boundary of the adjoining parish of Weekley, and connecting the Rockingham and Weekley roads, is plainly marked. To the north of Stonylands the field-names included Brokenback Furlong, and Long London, while to the immediate south is Clovenhill, Cloverhill as it is now called.

Finds have been made from time to time in the district in question, since the time when Bridges wrote his history. The late Mr. Charles Wise, of Weekley, used to tell of large quantities of valuable Roman coins which a neighbouring farmer once had, and of the sale of mugfuls of smaller and unimportant kinds. Also he stated that many years ago, in the field called Blackmiles or a field adjoining called Houselade, a sort of oven, which may have been part of the heating arrangements of a Roman villa, and stones believed to be the foundation of a building were discovered.

Until about 1903, when the land in the north of the parish of Kettering became building land, nothing special beyond the items above mentioned had been found. In that year, however, the Co-operative Society bought an estate in the district which comprised the old Stonylands, and on their laying out and draining it finds at once began.

Broken Romano-British pottery came to light in very great quantities and over a large area. Bones, animal and human (principally the former), and a number of coins were also found. There were, however, no traces of buildings, and the only stonework discovered was connected with two or three wells. One of these at the eastern end of Blandford Avenue was about 14 ft. deep and about 4 ft. in diameter, and was principally sunk in the kale. It had little stonework round it, only some 3 ft. near the surface. Another well at the eastern end of Neale Avenue, of the same depth and diameter, was cased round to the bottom, where the remains of some leather sandals were found.

The facts relating to the finds to this date were communicated to the Northampton and Oakham Architectural and Archaeological Society in a paper read by the writer on 25th February, 1904, and subsequently printed in their *Proceedings*. Since that date isolated finds have been made of urns, pottery, coins, and a few bronze objects, together with some skeletons, buried north and south. Interest, however, was quite revived when, a year or two since, ironstone-working on land to the north and



Fig. 1. SAMIAN POTTERY, KETTERING ($\frac{1}{3}$).

north-east of the Co-operative Society's estate and immediately to the north-east of Kettering parish boundary was commenced, the fields dealt with including Blackmiles and Houselade.

For a time nothing special was brought to light, but before long the finds began. It is feared some important objects were simply dug away before a record of them was taken. One heard of a bath-shaped oven or opening of burnt stones, of wells and other like items; and one saw the remains of round holes sunk some 8 ft. in the earth and about 8 ft. in diameter, but the modern contractors do not stay their hands in the antiquarian interest. As far as possible, however, an outlook has been kept by Mr. Charles B. W. Brook, of Geddington, on behalf of the Earl of Dalkeith, and by many local antiquaries, whereby much has been recovered and noted. Immense quantities of pottery have been turned up, together with coins in large numbers, and the finds of articles of ornament and general use have been frequent. A green glass jug with long cylindrical neck and threads on the body is nearly complete.

The pottery has been found at depths varying from 3 ft. to about 16 ft., and ranges from, it is believed, the first century. It is as usual very broken, but many vessels, some perfect and some nearly so, have been dug up. Good fragments of Samian ware are fairly common, and there are happily a few practically perfect items of forms 30 (fig. 1) and 37. Some painted ware is above the average (figs. 3 and 4), and there are some excellent pieces of Castor.¹ Over forty names of potters have been noted on the Samian ware, as follows (one in relief, fig. 2):

ADVOCISI	CROSBISO · M	MINIVS (?)
ALBVCI	DECMI · M	MXXTVLLI · M
ANEICVI	DOECI · M	OF PATRI [PATRICI]
ATTILLIM	DONNAV · F	PAVLLI · M
ATTIVS · FC	ELVILLI	PRIMANI · O
AVENTINI	OF · FELIC(IS)	PRIMI · M
BELINICCVS	GENIALIS	PRISCI · MA
BVRDO	IANVARIS	PRIVATI · M
BVTVRO	LITTERA · F	REGINI · M
CALETINI	LOTTI · OF	OF · RVFINI
OF · CALVI	LVPINI · M	SACRILLI
CANDIDI · O	MACRINI	TERTVLLI
CINTVS · M	MARCELLVS · F	VENICARVS
M · CRESTI	MEMORIS · M	OF · VITALIS

Some rather curious pottery masks may also be noted.

The coins are for the most part very poor and include specimens of Claudius, Nero, Vespasian, Domitian, Trajan, Antoninus Pius, Faustina, Severus Alexander, Gallienus, Tetricus, Carausius, Constans, and indeed nearly all the emperors to the time of Gratian and Honorius. A few silver coins have been seen, and some of tin alloy or tin.

Many brooches, one with enamel, and bronze and bone pins have come to light, together with some bracelets or armlets. There may be mentioned a bronze bell, a collar engraved to resemble a twisted torc, and an enamelled stool 1 in. high, originally with four legs at the angles, like several found at Albury, Surrey, and now in the British Museum. The most interesting of the bronze finds, however, have been a small bronze head and a bronze socketed staff-head with the head of an eagle. The head is about 2½ in. in height, 5 in. in girth, and broken off at the neck. It is, however, quite heavy, and weighs 7½ oz. The features are distinct and well though not finely worked, while

¹ A vase resembling *Brit. Mus. Cat. Pottery*, M. 2734, fig. 279; necks of bottles in form of female head (fig. 5) like M. 2757, fig. 282, and a cover like that of a complete vessel found at Castor (*Artis, Durobrivae*, pl. 49, fig. 4). Some examples of the face-urn were also found.

the hair is elaborately arranged and coiled. Possibly it is a representation of Minerva. At any rate, it rather resembles an ornament said to represent Minerva preserved in the Guildhall Museum. Whether it is a part of a statuette or whether, as has been thought, it may be merely a weight on a balance is difficult to say. In support of the latter idea there is a spot at the back which looks as if a hook may once have been fixed there.



Fig. 2. FRAGMENT OF SAMIAN WARE WITH SIGNATURE ($\frac{1}{2}$).

The staff-head consists of a socket surmounted by the head of an eagle with a round object in its beak. The total height, including the socket, is $3\frac{1}{2}$ in. It is practically identical with the find at Silchester illustrated in *Archæologia* (vol. lvi, p. 124), save that the socket is rounded and the excrescence at the foot is wanting.

A few rings, and intaglios by themselves, are also worth noting. One of the intaglios has a representation of Dionysos with thyrsus in the left hand and a cantharus in the right. Below are the head

and shoulder of the usual panther. The date is second or third century, but the execution is poor.

A good steelyard which was found, it is believed, not far from the site in question should also be mentioned. Some other fragments of bronze are difficult or impossible to identify, though one or two of them look like surgical instruments. Some knives and tools and other items in iron have also been found, together with some flints and a few fragments of urns of the Bronze Age.

The question of most interest relates perhaps to the real nature

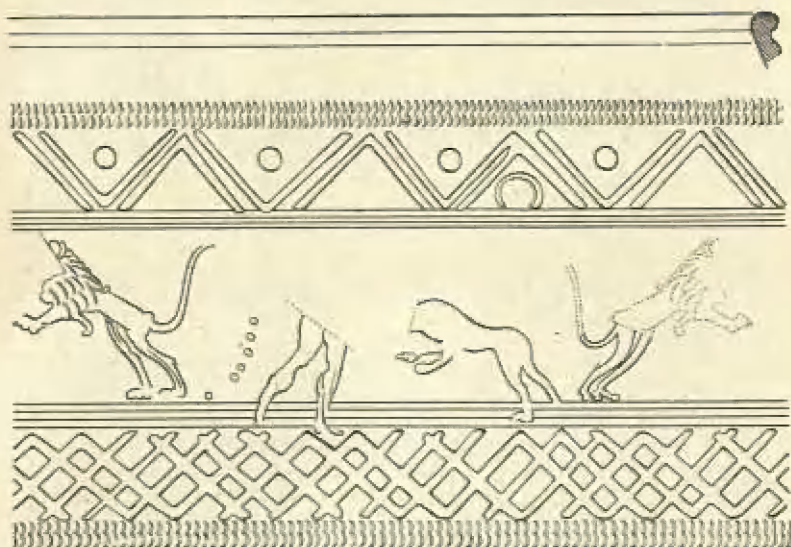


Fig. 3. DESIGN ON FRAGMENT OF SLIP WARE.

and extent of the settlement. It was hoped that traces of a villa or villas would have been found which would have accounted for the extensive area over which the finds have been made. These hopes have, however, so far been disappointed. For a long distance traces of a road or way were noticed, and, after a while, just where the workings ran adjoining the Co-operative estate, the men found a large area covered with pebbles neatly laid in cement. About this spot a cement flooring of triangular shape and bounded on two sides by fragments of walls was found. The area covered was about three yards by four yards, and in close proximity fragments of painted plaster, roof tiles and nails were discovered.



Fig. 4. RESTORATION OF FIG. 3 ($\frac{1}{2}$).



Fig. 5. NECK OF BOTTLE IN FORM OF FEMALE HEAD ($\frac{1}{2}$).

It was thought that possibly the last-named remains were those of a building on one side of a courtyard. As the workings went on, however, no further traces of buildings beyond two or three distinct finds of foundations came to light, and it seemed as if the pavement must have been a road, continuing as it did about 150 yards before its course took a turn to the east and so cleared the workings. That it is really a road is the more likely as it runs in exactly the course of the old road indicated on the plan of 1728.

By the side of the road, and indeed in one case adjoining it, were two or three wells. Underneath the road, curiously enough, there were at one spot traces of foundations, and there were also several finds of pottery. This is all the more interesting as the thickness of pebbles and cement was in places over two feet. At one point low down, too, traces of herring-bone stone foundations to support the road were apparent.

Most of the finds have either been in the wells or else in the black earth of old rubbish pits, the number of which is innumerable. The workings are still going on, but of late nothing special has come to light. It has been suggested that the settlement may have been one in connexion with the working of ironstone, but so far there is not sufficient evidence of removal of the stone to justify this. It is to be hoped, however, that before long there will be some discovery which will indicate clearly what the nature of the settlement was, and that these notes may be merely the introduction to another paper dealing with much more important and interesting discoveries."

DESCRIPTION OF PLATE.

Fig. 1. Bronze knife-handle, dog chasing hare.

2. Embossed bronze plate, Late Celtic style.

3. Bone pin, axe-head top.

4, 5. Bronze pins, incomplete, with claw settings in the head.

6. Bronze pin, moulded head.

7. Crescent brooch, enamelled.

8. Finger-ring with setting.

9. Gilt brooch with conical setting of glass: this type sometimes found in Anglo-Saxon graves.

10. Finger-ring with setting.

11, 13. Brooches, first century.

12. Metal spoon, stem wanting.

14. Lozenge pendant, enamelled.

SIR ARTHUR EVANS described one of the urns shown on the screen as a descendant of the cordoned vessel that characterized the Late-Celtic civilization. The bronze head on exhibition was that of a Diana, with the usual twist of hair or top-knot, and had none of the attributes of Minerva.



ROMANO-BRITISH OBJECTS FROM KETTERING

Mr. REGINALD SMITH drew attention to the frequency of finds in the ironstone-diggings of Northants and the neighbouring county of Rutland. The Northampton sand seemed to have had special attractions for the Anglo-Saxon settler, and conceivably the population of that region was comparatively dense also in the Roman period. It was, on the other hand, possible that a few feet stripped from extensive areas in other parts of England would reveal a similar wealth of Roman and other antiquities.

The PRESIDENT thought it a pity that these ironstone-diggings were not recognized as important archaeologically from the beginning of the enterprise, but congratulated Mr. Bull on his success in difficult circumstances, and Mr. Brook on the interesting collection he had brought for exhibition. He hoped that the interest of the landlords in these discoveries would lead to the exhibition of further remains from the neighbourhood.

W. H. ST. JOHN HOPE, Esq., M.A., read the following Report of the Committee for the excavations at Old Sarum during the past season :

The excavations at Old Sarum in 1910 were begun on 22nd May and continued without interruption until 29th October; the work, as in the previous year, being carried out by Lt.-Col. Hawley and Mr. W. H. St. John Hope.

The work carried out in 1909 was confined to the area occupied by the upper earthwork, which contains the chief buildings and inner bailey of the Castle of Old Sarum, and resulted in the opening out of the gatehouse and of a postern gateway opposite, together with the remains of a large tower that defended the postern, and other works in connexion with it. Last year (1910) the main work was the exploration of the great tower or keep of the castle and its adjuncts, which occupied most of the north half of the inner bailey.

The extensive clearance of the site made in 1909 left off at the southern foot of a long bank of rubbish in the north half of the bailey. Part of this fell away during the winter, disclosing the rubble core of a massive wall, which was eventually found to form the south side of the great tower. It has a total length from east to west of 135 feet, and shows a more or less continuous plinth of excellent Norman masonry, upon which stands the remains of a wall with pilaster buttresses at intervals. At its east end plinth and wall are returned northward for 82 feet, but the line is broken at 51½ feet by the projection of an added chimney-breast for a fireplace within. Beyond the point where the plinth

and wall end the main wall returns westward and another wall continues the line northwards for 54 feet up to and through the wall that encircled the bailey, and there forms the east side of one of the towers upon the wall. Just to the north of the chimney-breast there abuts upon the corner of the great tower a semi-detached garderobe tower.

The great tower itself is at present without a parallel in this country on account of its unusual plan. On paper it appears as a rectangular structure measuring 104 feet along the north wall, and 81 feet from north to south; but its arrangement is most peculiar.

Behind the south wall described above is a range of chambers with an average width of 15 feet, consisting of a chapel to the east and a kitchen to the west, with a smaller chamber beyond. This chamber has a thinner outer wall than the kitchen and chapel, and seems to have formed the basement of the south end of a barbican or fore-building covering the whole or part of the west face of the keep, and approached from the bailey by a broad staircase on the west. But the remains of both features are too fragmentary and uncertain to be represented on plan. The chamber under notice was originally about 15 feet square, and had its north, west, and south walls ashlar for some way up. It was separated from the kitchen by a wall $3\frac{1}{2}$ feet in thickness, afterwards increased to 8 feet, through which it was entered. This thickened wall was afterwards cut away or the opening in it widened to 10 feet, and is now represented by a rough projection of $5\frac{1}{2}$ feet at its north end. The square room has also been subdivided by a rubble cross-wall from north to south, with a doorway through it. The narrowed western division into which this opened seems to have contained a staircase to the floor above, perhaps in place of a former one when the room was square. The outer wall is too ruined to show how the lighting was managed.

The kitchen was at first $41\frac{1}{2}$ feet long, and consisted of an outer chamber 20 feet long, with a wide doorway¹ from without and a window² to the west in the south wall. From it an archway of 13 feet span and of two orders opened through a wall $6\frac{1}{2}$ feet thick into the inner chamber, or kitchen proper. This was 16 feet square, with a window to the south and a large fireplace across the north-east corner. The hearth, of tiles set on edge, still remains, and from before it were excavated the loose bases of four piers, each $17\frac{1}{2}$ inches long and $11\frac{1}{2}$ inches wide, and with chamfered corners, that carried the lintels of the fireplace. Against the north wall of the kitchen is the base of a stone

¹ Part of the east jamb only is left.

² The sloping sill of this is left.



OLD SARUM : NORTH-EAST ANGLE OF GREAT TOWER

bench or dresser 2 feet wide. The walls throughout have been plastered, and the east wall, as shown by a curious thickening of its upper part, was evidently begun with a slightly different direction from what was afterwards adopted. There is nothing to indicate whether the kitchen was vaulted or not, but probably it was. It is also a question how the flue of the fireplace was carried up or otherwise disposed of.

The chapel is 47 feet long, and consists of a nave of two bays and a chancel of one bay with a recess eastwards, 6 feet deep, for the altar. A broad arch divided the chancel from the nave, and a similar arch subdivided the nave. Both nave and chancel were vaulted, and the altar recess was doubtless spanned by a semicircular barrel vault. The vaulting ribs sprang from angle shafts, but of these nothing is left but a moulded base, with a species of dog-tooth ornament round it, in the south-west corner of the nave. The chapel was entered from the bailey by a doorway in the western bay of the nave, which had also a stone bench along the walls and a window in the eastern bay. The chancel had probably a window to the south and perhaps a loop over the altar. Of the altar itself, part of the rubble block remains, and this and the marks on the wall behind, which retained, when uncovered, much of its plastering, show that it was 5 feet long, 2 feet 11 inches high, and $2\frac{1}{2}$ feet wide. The extent westwards of the altar platform is also evident. A number of fragments of a large and thick slab of Purbeck marble found hereabouts may have belonged to that which originally formed the top of the altar.

The walls of the chapel are much ruined within, and both the north and south sides have been stripped of their facing. The bench round the nave was provided for from the first, and had over it a band of ashlar, part of which is left in the north-west corner. The wall face above this was of coursed flint-work, plastered. None of the vaulting was found, but this is not surprising in view of the wholesale plundering of the site for stone of every kind.

From the chapel there extended northwards along the east front of the keep a building of at least two stories. The ground floor was on the same level as the bailey, and originally formed one room, 50 feet long and $16\frac{1}{2}$ feet wide, with a wooden ceiling carried by a row of wooden posts down the middle. It was entered by a doorway in the north end of the east wall, which also contained four windows. The walls were of flint rubble, but the east side had a double chamfered string-course below the windows, and the west wall seems once to have been faced with ashlar, now all stripped off save a few stones at the north end. The room was at first probably little else than a cellar, and it will be

remembered that a charge for making a door for 'the cellar of the Tower' occurs on the Pipe Roll for 1130-1, but it was subsequently made more comfortable by the insertion of a large hooded fireplace in the middle of the south wall. This still retains its stone curb and rounded back and the side walls of the hood, and is represented outside by the chimney-breast already noted. A square block containing a vice to the floor above, built against the north wall, may be of the same date as the fireplace. At some later period the room was shortened by cutting off 16 feet of its southern end by a cross-wall to form a vestry to the chapel, from which it was entered by a doorway in the chancel wall, now represented by a breach.

As will be seen from the plan, the kitchen and chapel range and the block just described form two sides of the square of the great tower. The rest of the area of this is not, however, on the same level as the kitchen and chapel, but on the first floor, and what should have been the basement is filled up solid with chalk. The walls, nevertheless, are carried down to a considerable distance below the main floor, and seem to have been built, like the kitchen and chapel, upon the level of the bailey, and the chalk filling thrown in as the work proceeded. As the platform on the north and west sides of the keep was no doubt formed at the same time, the chalk filling perhaps served as scaffolding for the basement story. The first-floor divisions of the great tower consist of one large chamber or hall in the middle, measuring 48 feet long from north to south and $44\frac{1}{2}$ feet wide from east to west, with another chamber to the west of the same length, but only 21 feet wide. As both are ruined almost to the floor level, and in some parts to below it, it is not possible to say much about them. The western chamber no doubt had somewhere in its thick west wall the main entrance, probably covered by the barbican or fore-building already referred to; and in the east wall, which separates it from the hall, is a doorway at the north end into the hall itself, and towards the south what may be the remains of a hutch or serving window. The hall, if it were not spanned by an arch like the contemporary great tower of Hedingham, must have had one or more rows of posts to carry the great beams of its wooden ceiling, but as no traces of them remain it is impossible to say how they were arranged. From both chambers there would have been doorways into rooms over the kitchen, chapel, and eastern block, but of these nothing is left. The size of the added chimney-breast on the ground story suggests that it also carried the flue of another inserted fireplace on the first-floor chamber above it.

The large hall on the upper level has the whole of its north side covered by a room, 48 feet long and 16 feet wide, that



OLD SARUM : SOUTH-EAST VIEW OF ST. NICHOLAS CHAPEL, ETC.

opened out of it. This perhaps formed the great chamber. It does not seem to have belonged to the first setting out, as the north wall of the hall was originally carried up with a thickness of over 7 feet, but with the change of plan the wall was reduced to 4 feet in thickness, and the new chamber built outside it. As the hall could have been lighted only by windows high up in its north wall, the added chamber was probably of one story only, which would account for its having thinner walls than the great tower to which it is attached. In the middle of its north wall are the remains of an ample fireplace, with rounded back set with thin tiles laid herring-bone fashion, and outside were found many of the stones of the top of the Norman chimney that belonged to it. This had a conical spire or capping, pierced with holes for the issue of the smoke, and rising from a moulded cornice enriched with dog-tooth ornament. One or two of the vertical courses under this also had smoke-holes, pierced in alternate spaces marked by a series of sloping grooves, and below them was a broad band or belt carved with a scroll pattern. It would be interesting to know whether so ornate a chimney of its date has been noticed elsewhere in Britain. Besides the fireplace just noted, there is a hearth measuring $4\frac{1}{2}$ feet by $3\frac{1}{2}$ feet, of tiles laid on edge, in the floor towards the northern end of the chamber, but its date and purpose are both conjectural. In the east wall there was probably a doorway into another room beyond. This forms part of a block of some interest built on to the north-east corner of the great tower, in continuation of the range forming its eastern face, and measuring at least 54 feet long and about 24 feet wide externally. The south end has a basement chamber about $15\frac{1}{2}$ feet long and 18 feet wide, communicating with the ground-story hall to the south by a doorway in the corner, and lighted by a window in its east wall, which also contains a blocked doorway. In the middle of the room is the square base of a stone pier, standing upon a sleeper wall which also carries responds in the north and south walls. The responds, and probably the pier, had chamfered corners, and, like the bases, were laid in alternate courses of white and pale green stone. On the west and south sides the walls are standing to their full height of $13\frac{3}{4}$ feet and show that, notwithstanding the dividing arcade, the room was not vaulted. The arches of the arcade for some reason were of unequal span, the northern being $4\frac{1}{2}$ and the southern $6\frac{3}{4}$ feet wide. In the west end of the south wall there seems to have been a recess, but only the lower part of the wall remains. The west and north walls are faced with coursed flint-work, but the south with ashlar, both within and without.

The first or main floor of the block under notice consisted

originally of a room to the south over the basement just described, and a tower to the north, having a set of garderobes between in its south wall.

Of the tower not much can be said. It was of very solid construction, with walls about 8 feet thick at the base, and a rectangular chamber in the middle measuring originally about 10 feet from north to south and $7\frac{1}{2}$ feet in width. The chamber was entered by a narrow doorway and descending steps in its south-west corner, and was subsequently lengthened to 14 feet by hollowing out the solid masonry of its north end, where also its window must have been. Possibly this chamber was the treasury, in which case the recess on the north may have been cut away to hold the hutches bought in 1181-2, when £9 1s. was also spent on 'the treasure-house within the tower'. There are some suggestions on the south side of there having been a passage through the tower and steps to an upper floor. The east side also shows externally the remains of a battering plinth, which was no doubt carried along the north and west sides also. The front of the tower must have been flush with, or only very slightly in front of, the wall surmounting the chalk bank that encircled the bailey.

South of the tower chamber is a platform $18\frac{1}{2}$ feet long and $8\frac{1}{4}$ feet wide. Originally this formed part of the tower, and contained two deep rectangular garderobe shafts, side by side. They still measure 28 feet in depth from the platform. That to the west is $5\frac{1}{2}$ feet long by 4 feet 10 inches wide; it is lined throughout with ashlar and spanned lengthwise at the top by a semicircular arch 20 inches thick. This arch must have carried a dividing wall, extending upwards to the floors in the upper part of the tower. The eastern pit, which is also ashlar lined, is 6 feet long and as wide as the other, but its length was reduced by quite 2 feet at the top by an arch spanning its east end at the main level.¹ This arch and a remaining length of 3 feet of the platform eastwards, where the masonry has been cut away, probably carried the floor of the wall-chamber on the ground floor of the tower to which this garderobe belonged.

At some period not long after their construction these garderobes were done away with and the area they covered added to the room south of them on the main floor. This must have entailed the pulling down of the south side of the tower, since the existing platform has been formed by the removal of the masonry between the two shafts, of that of a block 5 feet square overlapping the eastern pit, and of all the outer face of the tower, which was thus set back 8 feet. The pits were then filled up to their present tops with chalk. Possibly this was all done in 1181-2.

The room which was enlarged by their inclusion was 24 feet

¹ Only the springing of this is left.

from north to south, and 18 feet from east to west, and had in the middle of its west wall the remains of a three-sided fireplace. It probably became the bedroom attached to the great chamber, and had a doorway in its south-east corner into a garderobe tower beyond.

This tower did not form part of the original construction. It stands not quite at right angles to the main building and overlaps the corner of the great tower. It is 16 feet wide externally, with an average length of 28 feet,¹ and is built within and without of ashlar masonry. Internally the tower is nearly filled by two large pits side by side, each about $9\frac{1}{2}$ feet long and $7\frac{1}{2}$ feet wide. From the top of the north wall they are still 19 feet deep. West of the pits is a passage about 4 feet wide, entered originally by a doorway, now blocked, from the basement chamber on the west, and probably by a doorway from without in the south end, but this is now represented by a breach only. The passage is subdivided by a cross-wall. On the north side of this is the base of a newel staircase, but unless this is of old material re-used it is difficult to see how it could have been continued upwards. At its foot is a doorway into the garderobe, which had the pit floored over at this level, with a row of seats against the south wall. It is, however, doubtful whether this is the original arrangement. The existence of two pits shows that the tower was carried up sufficiently high to provide garderobe accommodation for more than one upper story, but as it is now reduced in height to only about 6 feet from the bailey level it cannot be said exactly how it was arranged.

The northern half of the garderobe tower is built into the chalk bank that encircles the bailey. About 10 feet to the north, and practically parallel with it, is another mass of building of somewhat puzzling character upon the top of the chalk bank. It extends eastwards with a slight trend southwards from the southern half of the curtain tower, but for what distance is at present uncertain, as it dies away in a shapeless mass of concrete. It consists of a northern block 10 feet thick at the base, setting back to $9\frac{1}{2}$ feet above. Against the south side of this was built a block of the same thickness with an arch of 12 feet span against the tower in its western end. The arch and all east of it has unfortunately been destroyed, but part of the impost from which it sprang is left on the east. The arch was subsequently closed by building an ashlar wall across it and filling up with chalk the space behind. Why this was done is not clear, but as the block to the north is torn away, by a settlement north-eastwards, from the tower to which it was attached, as well as from the block with the arch, the filling-in may have been a matter

¹ The north side is $26\frac{1}{2}$ feet and the south side $29\frac{1}{2}$ feet long.

of precaution. Part of it has lately been removed to show the construction.

As the block just described is built into the angle formed by the tower and the bailey wall it must have served in some way as an annexe to the tower, but in what way is at present uncertain. Possibly further excavations to the eastward during the current operations may throw some light on the matter.

On the other or western side of the tower is another addition of some interest. It is represented now by two garderobe pits, built side by side in the angle formed by the tower and the great chamber of the keep, apparently to take the place of those formerly in the south wall of the tower. The eastern pit is sunk against the tower wall and is roughly 8 feet square, but none of its angles is a right angle. Three of its sides are ashlar faced, and it has a rubble backing of about 8 feet in thickness north and south. The west side is a wall ranging from 3 to 4 feet in thickness, which separates the eastern from the western pit. This is also ashlar lined, and much smaller than the other, being roughly an oblong $7\frac{1}{2}$ by $4\frac{1}{2}$ feet. The thick backing of the larger pit extends beyond this too, but to the west the concrete is not much more than 3 feet thick. The depth of both pits from the present platform is 22 feet. How the pits were worked can only be suggested. They were no doubt contained in a garderobe tower attached to the tower east of them, and the larger pit probably served the garderobes in connexion with the ground story of this, and the smaller pit those of the upper story.

In the chalk platform between these garderobes and the bailey wall northwards were found several human skeletons lying east and west, but without anything buried with them to explain their presence here.

It should be added that within the great tower there are no signs of the usual well, or of any garderobe shafts, or of any wall chambers. But these last are practically precluded by the insignificant mass of the outer walls, which nowhere exceeded $7\frac{1}{2}$ feet in thickness. There must also have been a vice to the upper works, but it is quite uncertain where it was.

One interesting question is the probable original height of the great tower. The ground-story chambers on the south and east faces certainly had other chambers over them. This would involve the carrying up of the large hall behind on the upper level, and the chamber west of it, through two stories, as in the towers of Colchester and London, Hedingham and Rochester, in order to gain sufficient light from a series of clerestory windows, and this was most likely the arrangement. There may also have been a low upper story as at Hedingham. A tower of such proportions, crowned by four corner turrets and surrounded by lower

buildings on all sides, would form quite an imposing feature on the lofty hill of Old Sarum. It is of course possible that the ranges of chambers on the east and south faces were also carried up another story, in which case the great tower would be correspondingly enhanced in dignity. But there is no direct evidence of this.

Of the architectural importance of the structure there is ample proof from the numerous carved and moulded stones found during the excavations. The doorways and window openings were enriched with every variety of zigzag and chevrony ornament, and the upper windows were subdivided by stone shafts with spiral groovings and other patterns like those at Hedingham and elsewhere. The roofs were covered, *more Romano*, with stone shingles, with ornate ridge-tiles glazed with various shades of red and green. It is conceivable that the kitchen and chapel range was roofed with a series of gables facing south, as the cross-walls of the basement imply, with the chapel gable continued northward along the eastern range up to the tower beyond; this again is what the plan suggests.

The architectural details are all consistent with the early date of the great tower, which must be a little previous to 1130-1, when it is mentioned in the Pipe Roll for that year.

In addition to the clearing of the great tower and its appendages the platform north of it was also freed from rubbish. A beginning had been made north of the postern in 1909 with the tracing of the bailey wall. This was further laid open last year as far as a large building athwart its line, directly north-west of the great tower. This building stands north-east and south-west, but is unfortunately almost entirely destroyed. Part of its west end is left, and its south side to a height of 4 or 5 feet, together with a fragment of the east end. These give an exterior length of 52½ feet, but the width cannot be exactly recovered. The building was evidently of some size and importance, and its outer wall seems to have had a substantial concrete foundation carried some way down the mount and covered by a battering plinth.

The character of this building and the way in which the bailey wall is stopped against and continued beyond it show that it was not a tower, and this and its line of direction are strongly suggestive of its being a chapel. In that case it may have been the chapel of St. Margaret which in 1246 the sheriff of Wilts. was ordered to find two chaplains to serve therein. The chapel in the basement of the great tower may then be that of St. Nicholas mentioned in the same year.

From the building under notice the bailey wall continues uninterruptedly in a straight line to the height of some feet as far as the tower north-east of the keep, against which it abuts. It

retains throughout its inner facing of ashlar, and at the west end are the landing and the beginning of a flight of steps that led up to the parapet walk. The outer face has not yet been laid bare, but seems to have been stripped of all its facing, except perchance the lowest course or so, which may have been buried early.

It will be seen from the plan that within the building north-west of the great tower, between it and the tower itself, and upon and across the line of the west wall of the tower, are various fragmentary lines of walling. In places these contain carved and worked Norman stones, and evidently belong to a period subsequent to the demolition of the great tower and adjacent buildings.

They are too imperfect to make much out of, and there is very little to date them by, but at one point just south of the north-west corner of the tower the wall which crosses the tower foundation contains a fireplace with herring-bone tiling at the back and a chamfered stone jamb, such as one finds in work of late fourteenth and early fifteenth century date. If this be so, then the destruction of the Castle of Old Sarum took place at a somewhat earlier date than has been assumed. By the end of the fourteenth century the castle had long ceased to be of any military or strategic importance to the Crown, and a similar licence for its demolition to that of 1331 for the taking down of the cathedral church ought to be found, possibly early in the fifteenth century. It is not without significance that a commission was appointed by the King's letters patent of 29th November, 1399, to inquire into divers wastes, dilapidations, and destructions committed in the King's Castle of Old Sarum.

One further work has to be recorded: the opening out of the southern end of the postern tower which was left undone in 1909. The plan of the tower still remains as a square of about 60 feet externally, but the continuation southwards of it of the great battering plinth has now been found to form the east side of a large garderobe behind, some 24 feet square, which overlaps half of the south side of the tower. This garderobe is built of flint concrete faced with ashlar, and has on the west a battering plinth with five chamfered courses at the base. The wall is here left to a height of over 8 feet from the top of the chalk bank into which it is built. The pit within is a truly mighty affair. It is 11 feet square, and though originally spanned midway from north to south by a semicircular arch $2\frac{1}{2}$ feet thick, it goes down below this to a depth of 42 feet from the present top of the wall, and is carefully lined throughout with coursed ashlar. Its subdivision shows that the tower contained at least two stories of chambers, since the cross-arch

was clearly built to carry a dividing wall. This huge garderobe pit makes the seventh discovered during the excavations of 1910.

South-west of the garderobe a fine stretch of the bailey wall has been opened out. It is here about $8\frac{1}{2}$ feet thick and still some 8 feet high, with its inner side faced with ashlar. The part that abutted northwards against the tower has been broken away, but has a return wall 4 feet thick at 10 feet south of the tower going eastwards from it to the garderobe, perhaps to carry a narrow bridge from the parapet walk into the garderobe itself. The outer face of the wall has been buttressed at intervals, but its ashlar facing is gone. At its southern end, so far as the bailey wall has been uncovered, it shows every sign of continuing, and has against it part of a stair from the top of the bank up to the parapet walk. But here the excavations of 1910 had to stop. One other feature came to light in this corner, a pit 9 feet long and $5\frac{1}{2}$ feet wide, roughly lined with re-used walling stones to a thickness of 21 inches all round. It is sunk into the top of the bank just south of the garderobe, but obliquely with respect to it, and was apparently a sawpit made by the men who demolished the castle.

It only remains to add a few words on the methods and system of certain repairs which were deemed necessary for the preservation of the newly bared walls. Where practicable the tops of these were simply covered with strips of turf. But in places where the walling was loose and irregular the walls were brought up to a common level with flint rubble laid in mortar, to form a bed for the turf, and rotten wall-surfaces were protected in like manner. Where the walls were faced with ashlar, as in the basement chambers of the great tower, no attempt was made to 'restore' this, and the flint-work that replaces it differentiates the new work of 1910 from the old. Wherever it was necessary, as occasionally, to insert a worked stone, care was taken to cut upon it the year of our Lord wherein it was laid.

Lastly, there must be reported the discovery, within a few days of the cessation of operations, of the castle well. It is not in any one of the places that have been pointed out or suggested, but in the very middle of the bailey, 10 feet south of St. Nicholas's chapel.

The well was found through the investigation of the reason for a deep and wide deposit of loose chalk at this spot. This deposit proved to be the filling of a sort of crater, at the bottom of which, at just 7 feet from the surface, came into view the ashlar ring, 5 feet in diameter, of the shaft of the well. It had evidently been destroyed down to this point, together with the well-house that is known to have contained it. The few feet of the shaft that were emptied yielded little else than worked pieces

of Norman masonry, plain and moulded, evidently relics of the destruction of the castle. Since it was impossible at the end of October to arrange for the further clearance of the well, and dangerous to attempt it in the condition in which it was found, the shaft was continued up to the surface in strong flint rubble walling, but octagonal in form instead of round for distinction, and the loose chalk filled in again about it.

One of the works of 1911 must of course be the emptying out of the well, which promises to be a costly and tedious process, since its depth may be anything down to 300 feet!

Lt.-Col. W. HAWLEY read the following Report on the objects found in the excavation :

The general spoil covering the surface of the inner bailey of Old Sarum is singularly deficient in any perfect objects contemporary with its Norman occupation. This, however, can be accounted for when one realizes how complete has been its destruction and remembers that its occupants retired gradually from the place and would be unlikely to leave behind anything valuable or even useful.

The woodwork of the buildings would have been the first attraction to the spoliators, and any object of iron, lead, or other metal; anything, also, secreted behind or in the woodwork, or which may have fallen into a cranny, would become their prey.

Building material was evidently the thing chiefly desired, and in their zeal to get it the spoilers razed the castle buildings to their foundations, leaving disappointingly little standing to give any idea of the former disposal and appearance of the various buildings. However, in their haste to get the stone they buried the garderobe pits under the spoil created by breaking up the wall cores, extracting the facing stone and better masonry. These garderobe pits seem to have attracted but little attention during early demolition, except that in some cases they were robbed of a portion of their upper ashlar courses; these having become buried, the later spoliators may have been unaware of their existence, except for vague memories and traditions, which appear to have passed down even to present times, of shafts communicating with wonderful passages running long and impossible distances.

It was fortunate that they escaped notice, as five out of the seven pits have afforded a collection of very interesting objects. In every case many feet of chalk and demolition rubbish were passed through before encountering the original contents, which may be described as a conglomeration of general domestic rubbish,



OLD SARUM : MEDIEVAL POTTERY

most of it very black from wood ashes, while other portions were brown. Potsherds were a dominating factor of it. Most of them were of very rough unglazed ware, and at first sight gave the impression of belonging to vessels of a period about the Roman occupation; but nearer inspection showed it to be quite unlike, both in substance and in the nature of the rims, and the illusion was quite dispelled after seeing a perfect vessel. We were fortunate in getting several entire specimens; noteworthy are some small cooking pots of round shape, narrowed slightly at their wide necks with a turnover rim about an inch wide. The bottoms of these are rounded, so that when placed on the fire they had the maximum of heat without pressing on and smothering the embers. They are much blackened by fire, so much so that they give the impression that they were made of a black substance. In reality they are of a coarse red ware, as were some of the jugs, which seem to have been used for the same purposes as the pots. The better jugs of glazed or partly glazed ware vary in colour through reds and greys to brown; all have handles and lips, but vary in shape from the short squat jug of the present day to a long attenuated jug, of a shape prevalent about the thirteenth century; perhaps a prototype of the long leather jack. There are several hundredweights of sherds of these vessels, and a large stable basket over 3 feet high was not large enough to contain those of one pit alone. In addition to these there is about a third as much of glazed ware, some of which is of the same rough substance just described: some is only partially glazed, but most is of a much better ware, both in substance and glaze. The clay has been well ground, and varies in colour: some is red, other salmon buff, other dark and light slate, and the glaze ranges from a golden yellow to dark green.

One of the perfect objects found was a water-bottle, cylindrical in shape, with flattened ends and an orifice in the middle of the body, reminding one of the small barrels used by Devonshire labourers. This had a yellow glaze, and there were fragments of many others, some with a green glaze. In some cases it was possible to assemble the parts and put them together sufficiently to make a nearly perfect vessel; especially so with the jugs, some of which are of the long shape before described and from 15 to 18 in. high. There is a jug of brown ware resembling in shape what is known as a 'grey beard': it has a brown-and-white glaze and a fine volute scroll pattern, and it is a pity that only a portion of it could be found. Some of the green glaze is excellent, and as glossy and good as on the day it was made. Other vessels have pretty designs upon them, chiefly floral, and others have those of weird animals. One

jug is distinct from, and superior to, any of the others, and is probably of foreign make (Spanish has been suggested, or Italian). It is 10 in. high and long and narrow, and of thin white ware with a green-and-brown lined pattern.

A considerable number of glass fragments was found, mostly in no. 2 pit; but nos. 5 and 6 produced many also. At the bottom of the former pit was a small massed collection of window fragments. These were difficult to extract, being cemented into a conglomerate of iron oxide, combined with lime, which had percolated down through the débris. Even after extracting them from this the incrustation was difficult to remove, and deterioration had rendered them more or less opaque, except the red, blue, and amber pieces, which had resisted corrosion. All the fragments bore very ornate patterns, painted with a vitreous substance, afterwards burnt on. The letters of an inscription were visible on some, but were not continuous enough to decipher.

Whether the domestic glass was *all* foreign is not at present known, but there are certainly several pieces of Venetian; notably portions of a yellow wine-glass, having a thread-pattern of green on the body and round the base. Another clear white piece had a thread-pattern of blue, and there were a few others. Also there is a very thin clear white fine fragment of a sort called Persian. All these had escaped corrosion; but there was a large quantity of small fragments in the muddy débris, including yellow, which crushed to powder if pressed between the finger and thumb. The intercommunication between this country and the south-east of Europe during the crusades might account for the presence of this glass. There had been vessels, seemingly decanters and cups, of a beautiful dark blue glass, often with a ribbed outside pattern; a few pieces are mottled with red streaks, and one piece has gold burnt upon it.

The large quantity of ammonia and other chemical matter has ruined articles of iron and of copper compounds; many have been reduced to a mere stain of oxide, but some have escaped sufficiently to show their form. Of iron there are keys, knife blades, heads of hammers and other tools, padlocks, side locks, buckles, scissors shaped like shears, ankle manacles, and a window-bar with the lead fixing still upon its end, and many other small articles. In bronze and copper compounds there are fragments of the bronze casing of a mazer, bearing a punched inscription, in which R. I. can be seen, also floral decoration; the rivets are still present, and to them adheres a small portion of the wooden bowl. Two small portions of a banner, in copper, are heavily gilt and must have been very beautiful, as traces of armorial bearings in enamel can be seen upon them and the gilding is



OLD SARUM : MEDIEVAL POTTERY

still quite bright. There are pieces of a copper ornamentation, seemingly from the top or sides of a casket, which have been gilt, and several small articles also show signs of gilding. There are hawks' bells of brass, round-headed pins of the same metal, and a small needle; part of a bronze spur with a huge rowel, and many other small things. The most interesting find is a piece of lace, formed of gold thread woven into silk, and it is marvellous how it can have escaped destruction. The heraldic pattern of shields, with lions and leopards alternately between them, can still be easily seen. A small gold ring with a deep square setting containing an emerald was found not far from it. Silver was scarce, and is only represented by a small thin object, elliptical in form, $2\frac{1}{2}$ in. by $1\frac{1}{2}$ in., the use of which is not apparent.

Lead is represented by a few pieces of rectangular window frames, measuring about 2 in. by 4 or 5 in. The glass originally inserted in them has also been found. There was also found what would appear to have been a lead pencil. It is a pointed cylinder of lead, about half the length of an ordinary wooden pencil of the present day and of about the same diameter.

Some objects of bone are interesting. There is a flageolet made of the ulna of a swan's wing, which is perfect, except for the wind cutter, that was perhaps of wood and has perished. There is a set of four bone rings, two of which are prettily ornamented and may have encircled a flute. There are two lady's corset or busk bones, properly curved to fit the body, ornamented down their length with concentric rings. There are two draughtsmen, one of which is ornamented by lathe turning. Many other articles of bone do not merit description here.

The collection of potsherds was rivalled by the multitude of bones discarded from the dining halls and kitchens. Chief amongst these were those of the fallow deer, several fine antlers of the same being obtained, and a fine pair of the roe-deer, apparently less numerous; and, strangely, the stag is not represented. There were also bones and skulls of a small variety of sheep; others of ox, pig, duck, goose, swan, and common fowl, some with well-developed spurs, suggesting that they had been used for cock-fighting. Bones of pigeon, partridge, snipe, and many kinds of small birds also occurred.

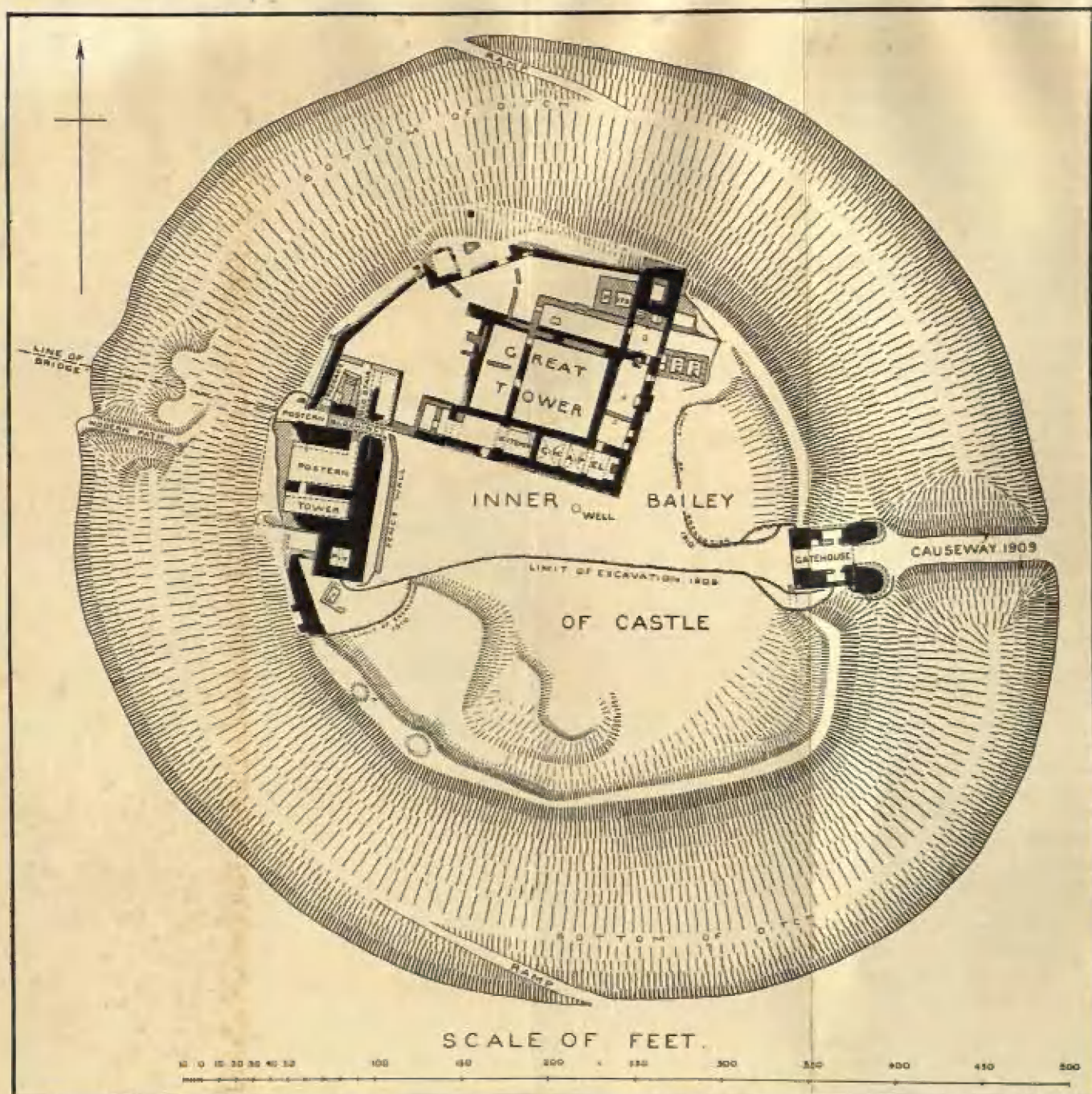
There were large quantities of oyster shells; also the shells of mussel, whelk, cockle, and winkle, and the broken claws of crabs. Bones of fish and patches of their scales were often found, though it is not clear what fish they were; but sea-fish were certainly present, as the bones of a flat-fish were discovered. Bodies of dogs, cats, and rodents found a last resting-place in the pits, and their bones add to the variety of the list.

The state of things, taken from a sanitary point of view, must have been horrible, and it was found necessary to throw quicklime occasionally into the pits, layers of which were frequently met with, and to this lime may be attributed the destruction of many objects which would have been interesting. It is possible also that such a large mass of bones may have produced a small amount of fluoric acid, which would account for the destruction of the glass.

At the bottom of the pits there appeared to be a foundation of about 2 ft. of gravel concrete, which seemed strange and unreasonable as it would have been obviously necessary to get rid of the moisture. This can now, however, be accounted for, as the top of Old Sarum hill is composed of a cap of eocene deposit over the chalk, which has escaped denudation. The gravel being yellow, the percolation of iron and lime in solution into it has given the deceptive appearance of a concrete bottom. These pits, and perhaps some of the buildings, had their foundations on virgin soil.

The objects of stone from these pits are few, and consist of a few fragments of mortars and millstones of Andernach lava; also several stone cressets. Some of these are very rough, and have square and round recesses cut in them: others have been more carefully made by the mason, one having a rounded base and stem with plain mouldings, supporting a bowl. Formerly they were filled with oil or fat and a wick placed in them: they must have emitted volumes of black smoke which would be intolerable to us. This finishes the list of things found in the pits.

To return to the general spoil on the surface of the excavated portion of the citadel; the ornamented stone fragments are especially interesting, and have already been described. Roof tiles were found in very large numbers, especially those of rough red earthenware, resembling very much in size and shape tiles of the present day. Some of these had been glazed on three parts of their surface so that the tile immediately above covers the unglazed part; thus the whole exposed surface of the roof was glazed. There was a quantity of fragments of glazed cockscomb ridge-tile, but no perfect tile: these were well made and had a fine glaze either of yellow or dark green. Stone tiles or shingles of ragstone were also very numerous, and, in addition to these, shingles of shale had been used; but these are found to range in substance from shale to a very soft poor slate. The shale, despite the time it has lain there, will burn like a piece of coal. A small quantity of good pit coal was found the previous year near the postern, and had probably been brought there in times later than Norman.



PLAN OF THE INNER WORK AT OLD SARUM, SHOWING PARTS EXCAVATED DOWN TO THE END OF 1910.



Many of the same pottery fragments as appeared in the pits were met with occasionally, but the only nearly perfect vessel was found amongst chalk on the great tower level. It was a cauldron-shaped red vessel 18 in. wide by 15 in. high, and is nearly perfect after restoration. Two iron spade-shoes were found: doubtless those of the spoliators. These spades were shod in front with iron to protect the wooden edge, which would otherwise have worn rapidly away.

Odds and ends of lead were met with, and the previous year several pieces of sheet-lead were found, rolled up together for taking away, or perhaps putting into the melting-pot. Many spots where fires have been lighted show signs of lead dross, indicating that the lead was melted down into pigs or sows for convenience before taking away.

Nearly all the stone used in the building of the castle was obtained locally. The ashlar blocks of greenstone, used for facing the walls, came from Hurdcote, a short distance west of Wilton, and are of indurated greensand from the lower cretaceous formation.

The white or cream-coloured stone came from Chilmark, only a mile or two beyond the other place, where beds of the oolite crop up, the quarries there having been worked since Roman times and are busy at the present day. The Purbeck marble slab fragments, found in and around the chapel, probably came from near there, as the Purbeck beds also crop out in the neighbourhood. Perhaps some of the white stone may be Caen stone, for stone was certainly brought from distant parts, as the white stone at the north end of the corridor, north of the chapel, is nearly all Freshwater limestone from the Isle of Wight.

Very few coins have been met with, and those found are chiefly thin silver pieces, or silver pennies, ranging from Henry II to Edward I: but one was of Malcolm III of Scotland. Some bronze counters of Nuremburg make were found, one of which is in excellent condition. Other bronze discs are illegible and may or may not have been coins, and several such-like pieces occurred in the pits.

Considering the time the place was under Roman occupation, it is singular how little of that age has cropped up, and there is nothing Saxon as yet. Half of a millstone or quern of the Roman period, a fragment or two of roof tile, and two very small pieces of painted plaster and a coin of the lower Empire comprise all that has come to hand.

The PRESIDENT reminded the meeting that the Society was pledged to carry out a great work at Old Sarum, which would entail considerable expenditure of time and money. It was

therefore incumbent on the Fellows to visit the site themselves during the progress of the excavations and to induce their friends to take an interest in the enterprise.

AYMER VALLANCE, Esq., M.A., F.S.A., exhibited a painting of the old Palace of Richmond, on which he communicated the following note:

"The picture, executed in oils on an oak panel, was purchased by the exhibitor at Bonham's sale rooms in the spring of the year. So long a time has elapsed since the appearance of the two engravings in *Vetusta Monumenta* in 1765 (one of which has recently been shown by Mr. Alfred Clapham not to represent Richmond, but Nonsuch) that the occasion of the present exhibit may be taken for making a few notes on the iconography of the subject.

The earliest known views are two drawings by Wyngaerde, preserved at the Bodleian Library. One of them, which is signed and dated 1562, depicts the palace-front from the river; the other from the east.

A very archaic engraving, dated 1610, occurs in Speed's *Theatre of Great Britaine*. During the reign of Charles I Hollar made a drawing of the same aspect—the river-front—afterwards introduced into his oblong engraving in 1638. It is of this last-named view that the panel exhibited appears to be a copy. It contributes no new feature, but corresponds to the others in all respects except that the figures in all three versions are different—different that is in grouping and in numbers, though the costume appears to be of approximately one date. An old painting, now in the Fitzwilliam Museum, shows the palace from the south-west. This work is attributed to Vinckelboons. By the time that the Bucks' engraved view from the east was made, *i.e.* 1737, the main block of the palace overlooking the river had been demolished; and only the outer gateway and an adjoining range of buildings facing the Green and another at right angles, on the south of the front court, remained. Part of the front buildings was subsequently destroyed in the eighteenth century to make way for the row of dwellings for the accommodation of the Maids of Honour."

PHILIP NORMAN, Esq., Treasurer, exhibited a carved stone bas-relief from Guy's Hospital, Southwark, on which he communicated the following note:

"The stone bas-relief which I exhibit to-night measures $14\frac{1}{2}$ in. by $7\frac{1}{4}$ in., and is $6\frac{1}{2}$ in. deep, the material being of the nature of Caen stone. On the recessed oblong front is carved a male

figure, richly clothed, and seated with his right hand in an attitude of benediction, and his left holding up an open book which is supported on the left knee. A braided lock of hair hangs over his left shoulder. The face is apparently beardless, but in other respects the whole figure is in attitude so like that forming the centre of the tympanum of the south doorway of Barfreston church, Kent, besides bearing a strong resemblance to figures on other Norman tympana represented in Mr. Charles E. Keyser's well-known publication, that we must accept the subject as being identical, namely that often described as Christ 'in Majesty'. Although, however, this resemblance enables us to identify the subject, the very Eastern or Byzantine style of the figure gives it, I think, an almost unique interest.

This remarkable object was found between 1888 and 1890, near Guy's Hospital, Southwark, on the site of the Maze Pond Chapel, the pulpit of which had from time to time been occupied by noteworthy Baptist ministers. Since its discovery it has reposed in the strong room at Guy's until a few days ago, when it was kindly lent to me by the hospital authorities. On this site a college built for the students of Guy's was formally opened by Mr. Gladstone, 26 March, 1890.

That part of Southwark called the Maze, and the Maze Pond, on the site of which now stands the college, formed part of the pleasure-grounds attached to the inn or town dwelling of the abbots of Battle, which stood near the river, near the still existing Battle Bridge, and less than a quarter of a mile from Maze Pond. It was therefore thought at first that the bas-relief might have come from Battle Inn, but this idea must be given up, for there seems to be no reference to property of the abbots of Battle in Southwark before the thirteenth century.

A more probable suggestion is that it came from the town residence of the prior and convent of St. Pancras, Lewes, to whom the church of St. Olave, Southwark, was confirmed by William de Warrenne, second Earl of Surrey, and son of their founder. Soon afterwards, immediately south of the church and south of the way now called Tooley Street, they built or became possessed of this dwelling. Earl William died in 1138, and it is thought that at the time of his death the prior had no house near St. Olave's, and may have acquired the manor of the de Warrenne family, which is said to have been hereabouts. In the sixteenth century the western portion of the prior's lodging was incorporated in St. Olave's Grammar School, founded 13th Elizabeth. About the beginning of the year 1830, the grammar school being destroyed in making the approaches to new London Bridge, ancient remains of the prior's inn were also demolished. They consisted of part of a Norman hall and a vaulted crypt beneath,

and are described and figured in *Archaeologia*, vol. xxiii, p. 299. In 1832 another vaulted Norman crypt was found and destroyed in Carter Lane, about 250 ft. south of St. Olave's church and 155 ft. nearly due east of the previous crypt, an account of it with illustrations appearing soon afterwards in *Archaeologia*, vol. xxv. This also in all probability was connected with the prior's hostelry, which must have been an important building.

Although this bas-relief has at first sight an archaic air, owing chiefly to the rude proportions of the figure, closer examination does not seem to warrant the idea that it dates from much before the middle of the twelfth century. It has no signs of having been exposed to the weather outside a building, and it occurs to me that it may have belonged to the chapel of the hostelry of the priors of Lewes, but how it found its way into Maze Pond remains a mystery that can never be solved."

The PRESIDENT was already familiar with the stone carving, and recognized certain oriental features in it; but was inclined to compare it with Anglo-Saxon work about 150 years earlier than the date assigned. In work of this kind one had to allow not only for the peculiarities of certain schools but also for the personal equation of the artist, who might have copied an oriental model for picturesque effect. There was considerable difficulty in pronouncing on such a specimen without any hint as to its place of origin; but one way of arriving at the truth was to publish an illustration, which would serve as a record and elicit information.

Thanks were ordered to be returned for these communications and exhibitions.

The Ordinary Meetings of the Society were then adjourned to Thursday, 23rd November.



CARVED STONE BAS-RELIEF FROM GUY'S HOSPITAL (NEARLY $\frac{1}{2}$)

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